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ABSTRACT

The Statewide Longitudinal Study (SLS) of California Community Colleges was conducted between 1978 and 1981 to gather detailed descriptive and demographic data about California community college students and to answer questions about longitudinal research methodology and the needs of special student populations. This fifth and final SLS report begins with a detailed history of the project, then specifies and evaluates the attainment of its goals, outlines its limitations, and summarizes the content of the first four SLS reports. Chapter II discusses the research procedures and the project management plan, includes a demographic description of the 15 participating colleges, explains sampling procedures, and describes the methods used for collecting, managing, and analyzing the data. Chapter III categorizes students according to one of three major college functions, i.e., vocational, transfer, and personal interest, and describes the SLS sample of 6,940 students. Chapters IV, V, and VI each deal with one of these student categories, focusing on prototypical students and their objectives, accomplishments while attending college, reasons for leaving, and current activities. These sections also attempt to answer for each group of students whether attending a community college made a difference in their lives. Finally, Chapter VII provides a summary of the project and its findings, general comments on conducting a survey of this magnitude, and conclusions and recommendations. (HB)

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STATEWIDE LONGITUDINAL STUDY

1978-1981
FINAL REPORT

JC 820 275

M. STEPHEN SHELDON

LOS ANGELES PIERCE COLLEGE

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STATEWIDE LONGITUDINAL STUDY

Report on Academic Year 1978-81

Part 5 - Final Report

Funded by the Chancellor's Office
California Community Colleges
under P.L. 94-482, Title II, Part A

Project # 19-64741 - 3 - 8 453

M. Stephen Sheldon

Los Angeles Pierce College

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Preface

Community colleges have enjoyed the support of the California public, the legislature, and the press for many decades. Until recently, money has been plentiful, and there has been little competition between the various branches of post-secondary education.

In recent years, community colleges have come under criticism, some valid, some based upon questionable studies. Wilms (1980), in a study severely criticized by many of his colleagues, claims that community colleges do a poor job in vocational education. Pincus (1980), using others' data (some of which is similarly open to criticism), condemns community colleges for not having kept their promise to provide social equalization through vocational education. Kissler, using credible data, points out that community colleges transfer fewer students to the University of California and that those who do transfer perform less well than their counterparts a decade ago. Knoell (1981), using her own data (Knoell, 1976 as well as the reports of Kissler, Pincus, Wilms, and Sheldon and Hunter (1979), speculates that increased emphasis on community education means that community colleges ". . .will probably do many things less well and some things unsatisfactorily in the future."

There are three reasons for the developing conflicts about California Community Colleges:

1. The perspective of the viewer,

2. The semantics of descriptors,

3. The defensiveness of community college officials themselves.

Most recent critics operate from a national or statewide perspective. They see "the community college" as if there were much commonality in the community college systems, both between and within states. In addition, their perspective is that of the university or a State office in Sacramento. It's a bird's-eye view; much forest land, but few trees. In contrast, those who work on a community college campus view their own college as if it were as with snowflakes, unique among the thousands of such campuses in the nation. As always, the truth lies between these two extremes.

With respect to semantics, different colleges and districts within and across states use the same words to represent different events and phenomena and different words to represent the same events and phenomena. The words "General Education" can mean, among other things, liberal arts and humanities courses for transfer, all courses taken for other than transfer or vocational reasons, or all the educational opportunities offered on a campus. "Community-Based Education" can refer to courses offered without credit, courses that are financially self-supporting, or any educational experience offered to the community to meet the needs of service areas.

The words "Vocational Education" are frequently regarded as synonymous with "Occupational Education" and "Career Education"; all three have a variety of meanings. Is an apprentice electrician taking a course in algebra in order to meet union requirements a vocational student? Is a recent high school graduate following the computer science curriculum in order to transfer to the university as a mathematics major a vocational student? These examples were not fabricated; they are real cases and represent many thousands of our California Community College students.

There can be no doubt that the mission and function of the California Community Colleges have changed over the years. Given the open-entry-open-exit nature of the institutions, it is progressively more difficult to understand the mission and function because, to a great extent, they are determined by the use to which the students put the colleges.

This paper, the final report of the Statewide Longitudinal Study, sheds some light on the questions and criticisms. It provides no definitive answers, nor was it designed to. Its purpose is to describe the California Community College in terms of its students; who they are, what they do at college, and what outcomes result.

We have followed about 6,500 students for three years, students who first enrolled in one of 15 California Community Colleges in Fall, 1978. We have looked at their college records and have interviewed them between two and five times. We have studied the data collected with as much thoroughness as time allows. We know things about California Community College students that previously have been suspected, doubted, asserted, or denied. It is our hope that these pages will provide information to help clarify the issues that face the California Community Colleges. We have a clearer picture of California Community Colleges than the critics. We have better data than have been collected before. To paraphrase Hutchins, our data are not good community college data--they are just the best there are.

ACKNOWLEDGMENTS

Many people have contributed to whatever success has been achieved by the Statewide Longitudinal Study.

Russell Hunter was my partner in the study from its inception. He took complete responsibility for the communication channels with the participating colleges and with the Los Angeles Community College District. His forty-eight newsletters were timely, important, and often humorous. Russ authored the manuals and guides used for data collection and composed the interview schedules as directed by the consortium. He also did the lion's share of writing for three of the interim reports and smoothed the way for fiscal management of the project.

Bill Morris of the Chancellor's Office, California Community Colleges, was a mainstay in helping us navigate the morass of rules and regulations that govern VEA projects. Bill fought to keep the project funded and contributed conceptually to the consortium.

Rick Forsberg took the responsibility for data management and error correction. Rick demonstrated great originality in using the computer to analyze unusual and incomplete data sets. His sidekick, Jim Fortune, was a great help.

Though I am appreciative of all the college coordinators for their help in collecting and correcting data, Julie Slark of Santa Ana College made an outstanding contribution. She field tested many of the data collection instruments, and read each manual, guide, and interview schedule in minute detail, often correcting errors that we in the project staff missed. Julie also made major conceptual contributions to the study. I am most appreciative of Julie's help.

After the project started, several people were forced to take over as coordinators or major data collectors. Three who did a superb job were: Nilo Sarmiento, Foothill College; Betsy Stewart, Cerritos College; and Leslie Winegar, Shasta College. In the precision and care with which they collected and reported data, they outdid those whom they relieved of the job.

I also wish to acknowledge the invaluable assistance of the project staff, particularly Sandra Ullman, who served as project secretary and psychotherapist, and Nancy Zajac and Judy Hunter, who, as program assistants, handled the multitude of details about the sample.

I am grateful to Leslie Koltai, Chancellor of the Los Angeles Community College District, Herbert Ravetch, President, Los

Angeles Pierce College, and Norman Chapman, Dean of Instruction at Pierce. Chancellor Koltai and President Ravetch have always set an example of professionalism for district and college personnel. They encourage the faculty and administration to be concerned with a broad perspective of community college education; not just the college or the district, but the state and nation. Dean Chapman served as unofficial project advisor and has given me the support and encouragement I needed to finish the study.

Finally, I am sincerely appreciative of the help given by other past and present consortium members, each of whom assisted in bringing this three-year project to a successful completion. Their names and affiliations are listed below.

From the participating colleges:

Antelope Valley College	Frank Roberts
Bakersfield College	David C. Scott Jim Opperman
Cerritos College	Keith Adams Janice Dennis-Rounds Roger Holland
Contra Costa College	Phyllis Goldman
El Camino College	Jerry Garlock
Evergreen Valley College	Jon Kangas Nancy Reicheld
Imperial Valley College	Paulette Broome Demetrius Karathanos Dean Leptich Dalia Rodriguez
Los Angeles City College	Ben Gold
Sacramento City College	Pat Caffrey Valerie Hytholt Frank Navarette Bill Smith
Shasta College	Walter Brooks Colleen Zelazny
Southwestern College	Allan MacDougall

From other organizations:

California Advisory Council on Vocational Education (CACVE)	Dale Rezabek
California Community Colleges Chancellor's Office	William Anderson William Boakes
California Postsecondary Education Commission (CPEC)	Dorothy Knoell
Center for the Study of Community Community Colleges	Arthur Cohen
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R & D Commission, California Community and Junior College Association (CCJCA)	Robert Daly Angelo Segalla
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Chapter 1

Introduction

This document represents the fifth and final report on the Statewide Longitudinal Study of California Community Colleges (SLS).

There are seven chapters in this report. This first chapter gives a detailed history of the project, specifies the initial goals and objectives, how well they were met, and summarizes the major findings of the first four reports.

Chapter 2 describes the research procedures and the project management plan. It includes a demographic description of the 15 participating colleges, the sampling procedures, and the methods used for collecting, managing, and analyzing the data. Chapter 3 examines the three major functions of community colleges, that is, Vocational, Transfer, and Special Interest (see 1-29 through 1-34).

Chapters 4, 5, and 6 describe the findings about the three categories of students in the California Community Colleges; Vocational, Transfer, and Special Interest, respectively. Each chapter has three sections: the first section describes who the students are and why they came to college; the second gives their accomplishments while attending; the third tells why they left, and what they are presently doing. Part of the last section tries to answer for each group of students whether attending a community college made a difference in their lives.

Chapter 7 is a summary of the project and general comments on conducting a statewide study of this magnitude.

During the last three years, the project consortium has collected data on about 200 independent variables from about 6,500 students. Because some of the data were collected from telephone interviews and some only on special types of students, the numbers and percentages reported in this document may vary slightly from those given in the four previously published reports. Said another way, the SLS has a dynamic data base. The data collected from previous semesters have been continuously refined, corrected, and supplemented. The reader is asked to be understanding if the reported numbers and percentages vary slightly from those previously reported.

PROJECT HISTORY

During the academic year 1977-78, Los Angeles Pierce College began a proposed three-year longitudinal study (PCLS). Funds for the project came from the Los Angeles Community College District (LACCD). The stated purposes were to:

1. Describe major reasons for attrition from classes and from college.
2. Determine the reasons that students attend Pierce College and describe students' self-perceptions in terms of their education and training.
3. Determine the effects of attending Pierce College on the lives of the students.

A representative sample of two percent of all students at Pierce College in the Fall Semester 1977 was selected. This sample included new, re-entering, and continuing students. Those who dropped classes or left school were interviewed to determine their reasons for withdrawing. The interviews were continued in Spring 1978 to determine the reasons that students didn't register in college the following semester. Academic records were examined for the entire sample. Data for the study came from both telephone interviews and college records. The study was discontinued after one year in order for Los Angeles Pierce College to participate in the SLS. The results of the study are reported in Sheldon and Hunter (1978).

Some of the research methods used in the Pierce College study have relevance for the SLS.

1. Use of the last two digits of the social security number resulted in an excellent representative sample of total student body.
2. It was relatively easy to train interviewers to ask questions in the same manner and to understand the intent of each question.
3. One could develop a standard set of decision rules for classifying responses to open-ended questions.

The success of the PCLS led other institutional researchers to seek funding for a project of a similar nature to be conducted by a statewide consortium of California Community Colleges. With the support of the Southern California Community College Institutional Research Association (SCCCIRA), the Northern California Institutional Research Association (NOR CAL), the Research and Development

(R & D) Commission of the California Community and Junior College Association (CCJCA), and, especially, members of the staff of the State Chancellor's Office, the Center for the Study of Community Colleges wrote the first proposal for the current study. It was funded under VEA, Subpart 3 for the academic year 1978-79. Subsequent proposals were funded by the same source for 1979-80 and 1980-81.

Goals

The goals of the Statewide Longitudinal Study were:

1. To provide detailed information about pertinent aspects of the student bodies of California Community Colleges.
2. To provide information about the effects of college programs on the lives of the students.
3. To provide further information on the efficacy of small sampling in completing a useful and meaningful longitudinal study.
4. To provide information about the feasibility of using a small-sample, longitudinal study for supplying data to state and federal agencies valid for reporting purposes and for providing individual community colleges with a model to use in answering questions of a local nature.
5. To provide information on the factors within certain vocational programs that inhibit Limited-English-Speaking and Non-English-Speaking (LES/NES) students from enrolling.
6. To provide assistance in identifying needed curriculum and services for Vocational Education programs for disadvantaged and/or handicapped students, displaced homemakers, single

heads of household, homemakers working part-time or for students enrolled in majors that are non-traditional for their sex.

The objectives developed from these long-range goals are listed below.

Objectives

The numbers of the objectives listed below refer back to the numbers of the goals described immediately above.

1A. To produce frequency distributions and cross-tabulations of descriptive and demographic student data and to compute appropriate descriptive statistics.

1B. To report detailed reasons given for specific student actions such as:

   a. Being admitted to college but never enrolling in courses.
   b. Enrolling in courses but never attending classes.
   c. Attending classes, but withdrawing or being excluded before Census Week.

1C. To determine existing sex, race, or age bias in occupational programs.

2A. To compare job success of vocational and non-vocational students after one, two, and three years, as measured by:

   a. Rate of employment in field studied.
   b. Skill level of job in field studied.
   c. Salary of job in field studied.

2B. To compare and contrast perceptions concerning the value of community college experience among students.

3A. To compare demographic data of the samples drawn with those of the populations of the participating colleges and the state as a whole.

4A. To determine the similarity of federal and state reports when the data are estimated from the total student body and when they are extracted from the sample.

5A. To provide detailed information emanating from the students themselves of the factors within the local education agencies that are perceived by LES/NES students to be discriminatory.

6A. To provide detailed information emanating from the disadvantaged and handicapped students regarding the specific changes in curriculum and services that will make vocational education programs more attractive to them and more feasible for them to complete.

6B. To provide detailed information on the ways programs can be changed so that displaced homemakers, single heads of household, homemakers working part-time and students in programs non-traditional for their sex can enroll in and complete programs satisfactorily.

Limitations

The generalizability of the study was limited by the following factors:

1. Because the study was longitudinal, only first-time students at each college were sampled. Consequently, the sample is representative of first-time students but not of student bodies as a whole.

2. Given the number of colleges participating and the distances between them, there were some discrepancies in the application of the rules developed for telephone interviewers and college coordinators.

Planning and Conduct of the Study

The first steps in planning the study were made at a March 1978 meeting in Sacramento attended by members of the State Chancellor's staff and representatives of 20 community colleges in California. From these, 15 colleges were chosen to participate in the study. (The colleges chosen and the reasons for choosing them will be found in Chapter 2 of this report.) A major planning meeting to launch the project was held in June 1978; this meeting was attended by the 15 participating college coordinators, as well as representatives of the Chancellor's Staff, SCCCIRA, NOR CAL, and the faculties of UCLA and USC.

Thereafter, four consortium meetings were held each year of the study; two to plan data collection, and two to solve data collection problems. (A discussion of the management of the study will be found in Chapter 2, Methods and Procedures.)

FINDINGS

To date, four reports of the SLS have been published. Part 1 contained base data on the sample collected in Fall 1978, Part 2 on Spring 1979 data, Part 3 on Fall 1979 data, and Part 4 on Spring 1980 data. The present and final report, Part 5, includes data on academic year 1980-81 and college record data through Spring 1981.

The findings summarized below are subsumed under project goals together with the document in which the full findings were published; findings in this report will be referenced by chapter.

Student Demographics

Goal 1 addressed issues of demographics on California Community College students. This section contains a synopsis of the findings.

Goal 1

> To provide detailed information about pertinent aspects of the student bodies of California Community Colleges.

Overall, 45 percent of the sample were male, 55 percent female, a consistent pattern across all colleges. The distribution of age had an extreme positive skew. Though the mean age of the sample was 25.8, the median was 21.6 and the modal age was 18. There were but slight variations among the 15 colleges. About 77 percent of the sample was less than 30 years of age, and 45 percent were younger than 20 in fall, 1978.

Only one percent of the sample declined to state their ethnicity. Of the remainder, one percent were American Indian, seven percent were Asian, nine percent Black, and thirteen percent Hispanic. The balance, sixty-eight percent, were Caucasian.

Sixty-four percent of the sample had never married; 29 percent were married, and 6 percent were divorced, separated, or widowed. However, approximately three times as many women students as men were divorced, separated, or widowed. Seventy-six percent of the sample had no dependents (defined as any person supported by the respondent) and an additional 16 percent had one or two. The above findings appear to be a function of age.

Overall, 19 percent of the sample reported that they were students and not employed. Of those employed in Fall 1978, 15 percent of the sample reported that they held jobs categorized as unskilled.

Most of the 19 percent unemployed and 15 percent holding unskilled jobs were 18-20 years old. Twenty-eight percent reported holding jobs judged as semi-skilled, and 19 percent skilled jobs. Only 6 percent held professional or supervisory jobs. The mean hourly wage in Fall 1978 was $4.27, and the modal wage $3.50. Fully 40 percent earned less than $5.00 per hour.

Sixty-two percent of the sample had last attended high school, 18 percent a community college, and 13 percent a four-year college, though not necessarily graduating. Almost 60 percent of the sample reported that 12th grade was the highest completed; about 8 percent had not received a high school diploma, 22 percent had some college or trade school experience, and 7 percent held a bachelors degree or higher. Almost half of the sample (46 percent) reported no break between their last school and admission to community college. Twelve percent reported a one-year break, 15 percent had been out of school for between four and eleven years, and 15 percent had been out for 12 years or more.

A plurality of students, 40 percent, indicated that they expected to attend community college sporadically rather than continuously.

Eight percent intended to stay one semester, 10 percent one year, and 27 percent two years.

Thirty-two percent indicated that their chief college goal was Pre-Employment training, 10 percent Inservice Training, and 33 percent Preparation for Transfer. Twenty-one percent indicated that they were attending for purely personal interest reasons.

Prototyping[1] in the second year study showed that about 37 percent were vocational students, and 36 percent were hoping to transfer. Twenty-seven percent were Special Interest Students. There were only slight differences between the percentages estimated at different times from different data. The highest attrition rate was among the youngest students. The data for Goal 1 are given in detail in SLS, Part I.

When day and evening students were compared in SLS, Part 2, it was found that the two groups were very different. Day students, those attending classes that begin before 4:30 p.m., comprised 48 percent of the sample; evening students were 38 percent of the sample. The remaining students took classes at both times and were considered day students for purposes of the following discussion. The sex ratio in the two groups was almost the same (45 percent male, 55 percent female), but day students were found to be considerably younger than evening students. The mean age for day students was 23 years, that for evening students 30; the medians were 19 and 27 respectively, and the modes 18 and 22. Seventy-seven percent of day students had never married, compared with only 38 percent of evening students. There were no differences between the two groups with respect to ethnic background.

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[1] Systematic judgments were made by the college coordinators to classify each student into 1 of 18 groups. The groups were determined by student aspirations, enrollment patterns, and achievement. A detailed explanation is given later in this chapter.

Differences arising from age were found between the groups with respect to work variables. Only 5 percent of evening students classified themselves as "Students Not Usually Employed," compared with 27 percent of day students. Eight percent of evening students held jobs that they reported as Unskilled; 20 percent of day students had unskilled jobs. The proportion of semi-skilled jobs were approximately the same between the two groups, but 31 percent of evening students held skilled jobs, compared with 12 percent of day students. Thirteen percent of evening students held Professional/Supervisory Jobs, compared with 2 percent of day students.

Hourly wage figures reflected these job differences. The mean hourly wage for evening students was $6.10, that of day students $4.14; the medians were $5.22 and $3.41 respectively.

The educational level attained was also markedly different for the two groups. Forty-two percent of evening students last attended a high school, compared with 73 percent of day students. Twice the proportion of evening students had last attended community college (26 percent) as day students (13 percent). Twenty-two percent of evening students had last attended a four-year college; 9 percent of day students.

Data on college objectives is highly correlated with age. Only 22 percent of evening students said they wanted Pre-Employment Training, compared with 33 percent of day students. Sixteen percent of evening students and 44 percent of day students had a transfer goal. Nineteen percent of evening students wanted Inservice or Retraining compared with five percent of day students. Almost half the evening group (43 percent) said they had come for Self Interest, compared with 19 percent for day students.

Day students took more courses than evening students. The distribution of the number of courses taken by evening students has a mean of 1.9 and an extreme positive skew; that of day students is approximately symmetrical with a mean of 4.7. A higher percentage of evening students than day students had no A-F grades, probably because 60 percent of evening students not earning credit in Fall, 1978 reported that getting credit was not their reason for taking courses. The GPA for evening students was 2.5, that of day students 2.8.

When students were compared across the Vocational/Non-Vocational dimensions in SLS, Part 2, the classification criteria used were those of the Student Accountability Model (SAM) as described in detail by Gold (1979) (1981). After Spring 1980, Student Prototype information was used in making the vocational classification (see page 1-31). The information below is based upon the earlier, SAM system.

Little difference was found between the two groups in age. The proportion of women was slightly greater (58 percent female) among non-vocational students than among vocational students (54 percent female). No differences were found with respect to ethnicity, marital status, or number of dependents. As expected, more vocational than non-vocational students listed themselves as in Pre-employment training, Inservice training, or Retraining than Non-vocational, and a surprising percentage (30 percent) of the vocational students stated Transfer as a goal. This phenomenon was not understood until the Student Prototype, Technical Transfer was identified. (See Statewide Longitudinal Study Report, Part 4 for more detailed information.)

With respect to courses, units, and GPAs, the two groups were the same. The modal number of courses signed up for and passed was one; the modal number of units signed up for, attempted, and passed was three.

With respect to work variables, no important differences were noted. A few more vocational students held Skilled Jobs, and the mean hourly wage was slightly higher for vocational than non-vocational students.

Comparisons were made between attending and non-attending students in SLS Report, Part 3, to determine what differences existed between those who had withdrawn from college before Fall 1979 and those who were attending that semester. Attending students were significantly younger than those not attending. The mean, median, and mode were 24.6, 19.9, and 19.0 for the former group, and 28.1, 23.2, and 22.0 for the latter group. Other variables related to age were marital status and number of dependents. Seventy-three percent of attendees had never married, compared with 49 percent of the non-attending students, and attending students had fewer dependents. This difference probably reflects the numbers of students entering in Fall 1978 for special interest reasons (see Statewide Longitudinal Study Report Part 4 for a complete discussion of Student Prototypes).

Also probably a function of age, non-attendees held jobs requiring higher skill and received higher hourly pay. In addition, more attendees were unemployed.

Non-Attending Students were found to have favored non-vocational courses more than attending students. This difference would probably be greater were it possible to remove from the vocational cell those students who are Leisure Skill Students taking vocational courses.

There was little difference in the GPA of the two groups, but greater differences in COURSES SIGNED UP FOR, COURSES PASSED, UNITS ATTEMPTED, and UNITS PASSED. Non-attendees signed up for and passed fewer courses than attendees. Further, attendees passed a higher proportion of courses (70 percent) than non-attendees (50 percent). The mean and median number of UNITS ATTEMPTED (those units for which A-F grades were given) for attendees was 17.0, that for non-attendees was 6.1 and 2.9. The same figures can serve for UNITS PASSED for both groups.

The difference between the two groups probably is a function of their goals. Non-attendees have been shown to be older, and probably more of them are Special Interest Students than attendees.

Other data have shown that many of the Special Interest Students have little interest in obtaining college credit. The low percentage of COURSES PASSED by attending students is probably also a function of goals since many of the vocational students are more interested in job-related outcomes than college-related outcomes such as grades.

Attrition Patterns

Three kinds of attrition were addressed in the study:

1. Attrition of students who obtain admission but have Zero Active Units by First Census Week. (ZAUS Students) (SLS Report, Part 1)
2. Attrition associated with class drops and withdrawals between first census and the end of the term.
3. Attrition of students who do not return to college after one or more terms.

First-Semester Attrition

The most popular reasons for student dropout within the first semester of attendance are defined below. These definitions were developed in the Pierce College Longitudinal Study (Sheldon & Hunter, 1978) and adapted as necessary after formative evaluation in Fall 1978.

> Job Conflict involved schedule conflict between job and school. Students giving this reason remained motivated to attend, but for financial reasons placed a higher priority on keeping their jobs than continuing their education during that semester.

Disliked Class Content covered those situations in which the student discovered that class content was not what was expected, for example, was not that listed in the catalog or was highly theoretical when the student wanted practical skills or closed classes. A significant proportion giving this reason were in courses in which they did not originally intend to enroll. Their first choice of courses was filled before they were permitted to register.

Assignments Too Heavy was given by students who found they could not complete the homework assigned. This was different from Job Conflict in that the former was focused on class time, and this reason was focused on homework commitment.

Indefinite Motivation was an inference drawn by the interviewer based on vagueness of answers, speech patterns evidencing insecurity, for example, ending a sentence with a tonal upswing as if the sentence were a question rather than a statement, and on answers which did not quite fit the question, for example, "I missed my counseling appointment and decided to come back next semester."

Underprepared for Class covered those instances where the student lacked the prerequisite skills for the class, for example, arithmetic skills required for beginning algebra.

Job Preference Over School included those answers which showed that the student had made the conscious decision to enter the labor market full-time rather than continue his education. Unlike Job Conflict, this involved a rank ordering of priorities.

Disliked Instructor involved personality conflict with the instructor for the course. There was also a "Disliked Instruction" reason (seldom given), which covered the instructor's methods but did not involve personal feelings about the instructor.

Class Switching was the term given for those situations where a student was shopping around or juggling a schedule. Some of this involved taking the same course at a different hour for personal convenience.

Between-Semester Attrition

In Fall 1979, students who had withdrawn from their colleges after the Fall 1978 or Spring 1979 semester were asked to give their reasons. As with first semester attrition, the reason definitions were developed during the Pierce College Longitudinal Study.

The reasons given differentiate between Vocational and Non-Vocational students. This classification was done using the SAM method (Gold, 1978); the data showed substantial differences between the two groups.

Met Objective was given by 14 percent of Vocational Students and 6 percent of Non-Vocational Students.

Many of the Vocational Students giving this response may have wanted quick access to job skills or taken a course to maintain a license. Many of the Non-Vocational Student responses may have been made by students seeking Leisure Skills, most having short-term goals.

Conflict With Another School was given by 2 percent of Vocational Students and 6 percent of Non-Vocational Students. They said that there was a conflict in class hours with another school.

Job Conflict caused 20 percent of Vocational and 27 percent of Non-Vocational Students to withdraw from school.

Job Preference was listed by 12 percent of Vocational and 7 percent of Non-Vocational Students. It is possible that many of the Vocational Students giving this response entered college expecting to complete a vocational program but left when they found that there was short-term payoff for the skills they learned in college.

Indefinite Motivation was judged to be the reason for 8 percent of Vocational and 12 percent of Non-Vocational responses. This finding would appear to support a case for more career counseling for young students because the outcomes of a purely academic education may be less obvious to the younger student.

Transfer was the reason given by 7 percent of Vocational and 8 percent of Non-Vocational Students. Though initially a puzzling response from Vocational Students, later findings indicate that many students taking Vocational courses intend to complete a baccalaureate degree in their areas of study.

Underprepared for Classes accounted for 8 percent of Vocational and 7 percent of Non-Vocational Students. The similarity between the two groups testifies to the parallel amounts of academic skills required.

The above accounts for 71 percent of Vocational Students' reasons for withdrawal and 73 percent of Non-Vocational Students'. Of the seven reasons, two (Met Objective, and Transfer) might be called "Positive Attrition." They account for 21 percent of Vocational Students and 14 percent of Non-Vocational Students. Three (Conflict With Another School, Job Conflict, and Job Preference) might be called "Neutral Attrition" because they involve neither success nor failure. They account for 34 percent of Vocational Students and 40 percent of Non-Vocational Students. Two (Indefinite Motivation, and Underprepared) might be called "Negative Attrition" because they involve some aspect of failure. They account for 16 percent of Vocational and 19 percent of Non-Vocational Students. Only the last two are under community college control and may indicate a need for better counseling.

Effects of Community College on Student Lives

In general, Goal 2 addressed the issues of the effects of community college education on student lives, especially with respect to Vocational Education. The specific goal was:

> Goal 2
>
> To provide information about the effects of college programs on the lives of students.

In the first semester of attendance, information was gathered on skill level of jobs held by students, hourly rate of pay and hours per week worked. These variables were collected every semester and reported previously. To a great extent, however, the above goals could not be met completely until the final months of the study when comparisons with baseline data could be made. However, during the course of the study, "en route" questions were asked, and these are summarized below. Final data and interpretation on this goal will be found elsewhere in this report.

Attendee and Non-Attendee Academics in Fall 1979

Students still attending in Fall 1979 were asked REASONS FOR ATTENDANCE, PLAN TO ATTEND FOUR-YEAR SCHOOL?, GOAL CLARITY, HOW MUCH HELP TOWARD GOALS OBTAINED FROM COURSES?, WHAT OBSTACLES TO COMPLETION, and MAJOR CHANGE?

Thirty percent of all respondents said they wanted to transfer to a four-year college, 25 percent of Vocational Students and 35 percent of Non-Vocational Students. Overall, 36 percent were attending for job-related reasons. Among Vocational Students, 46 percent were attending for job-related reasons; 28 percent of Non-Vocational Students were attending for the same reasons.

Special Interest accounted for 20 percent of all students, for 16 percent of Vocational Students, and for 24 percent of Non-Vocational Students. Each of the other reasons given accounted for less than 5 percent of students.

The high proportion of Vocational Students wanting to attend a four-year college provided part of the rationale for the Transfer Technical Major Student. The high percentage of Non-Vocational Students who stated a job-related goal indicate that many academic track students see education more as training for a job than anything else.

GOAL CLARITY was the result of an interpretation by interviewers. Overall, 51 percent were judged to have articulated specific goals, 37 percent had a general goal, and 12 percent has no clear goal. There were no noteworthy differences between Vocational and Non-Vocational Students.

When asked HOW MUCH HELP TOWARD GOAL OBTAINED FROM COURSES?, 20 percent of students said they had received Excellent Help, 43 percent Good Help, 22 percent Satisfactory Help. Only 16 percent gave Unsatisfactory ratings. The differences between Vocational and Non-Vocational Students, though not extreme, favored the Vocational courses.

Fewer Vocational than Non-Vocational Students expected serious obstacles to goal achievement. Ten percent of Vocational, compared with 16 percent of Non-Vocational Students, expected Finances to be a problem, and about 12 percent of each group expected Job Conflict to cause them problems. Sixty-three percent of Vocational and 55 percent of Non-Vocational Students expected no major problems.

With respect to major change, 55 percent of Vocational and 46 percent of Non-Vocational Students had maintained the same major. Of those who changed, the largest percentage were in Business & Management or General Transfer (a purely academic category).

Non-Attending Students were asked HOW WELL GOALS WERE MET, PLAN TO TAKE MORE COURSES?, and CURRENT PLACEMENT. More Vocational than Non-Vocational Students (42 percent compared with 34 percent) felt that they had met their goals completely. An equal percentage (40 percent) of each group felt they had met them somewhat, and the balance felt that their goals were not met. About 50 percent of each group felt that they would return to take courses in the future.

With respect to current placement, more Vocational Students (66 percent) than Non-Vocational Students (52 percent) held jobs. Twelve percent of Non-Vocational Students were in four-year colleges, compared with 7 percent of vocational students. Eight percent of Non-Vocational Students and 5 percent of Vocational Students were in other community colleges. The balance reported no change in their status and were probably special interest students.

Special Questions for Prototypes

In Spring 1980, questions based on the Transfer, Vocational, and Special Interest functions were asked of the sample. In general, these questions were based upon an interviewer's classification of the student during the interview (see Goal 7, page 1-29).

Transfer Students still in attendence were asked to which college they planned to transfer. Fifty-six percent stated California State University, 15 percent University of California, and 19 percent had not yet made up their minds. When those no longer in residence were asked for their current college, 42 percent listed California State University, 17 percent University of California, and 23 percent listed "Other," which probably includes those not in college. When asked how well they had been prepared for their upper-division work, 74 percent graded the preparation as either A or B, and 20 percent as a C. Only 5 percent gave their preparation a D or F grade.

Among Vocational students, 54 percent said they were preparing for a first career job and 30 percent said they wanted to improve their job skills. Thirteen percent were attending for second career or after-hours job skills. Sixty-five percent said that their course work was related either a great deal or somewhat to their job. Thirty-eight percent felt that courses were helpful in getting a job, but 73 percent felt that coursework was helpful on the job. Thirty-two percent felt that course work was helpful in getting pay raises, and 25 percent felt that it was helpful in getting promotions.

GENERALIZABILITY OF SMALL-SAMPLE FINDINGS

Goals 3 and 4 addressed issues of generalizability; whether it would be feasible to produce valid information from samples for reporting purposes to state and federal governments. Reports based on careful, small-sample reporting appear generalizable to large populations. Goals 3 and 4 are quoted below:

> Goal 3
>
> To provide further information on the efficacy of small sampling in completing a useful and meaningful longitudinal study.
>
> Goal 4
>
> To provide information about the feasibility of using a small-sample, longitudinal study for supplying data to state and federal agencies valid for reporting purposes and for providing individual community colleges with a model to use in answering questions of local nature.

Findings

To test how well these objectives were met, the SLS sample was compared with the total California Community College population on sex, ethnicity, and age. The comparisons were made with each participating college and with the total population of all colleges in the state. (These comparisons were reported in detail in SLS, Part I.) The total population statistics for all first-time students in the state, though available, would have taken excessive programming to identify. Consequently, the population percentages were those for all students enrolled in community colleges of the state in Fall, 1978.

With respect to sex, the ratios of the individual colleges varied around the total sample figure of 44.5 percent men to 55.5 percent women. The sex ratio for the state as a whole is 46 percent men to 54 percent women. The comparisons between the populations and sample sex ratios are well within the 4 percent sampling error provided by the sample size. Any discrepancies can be accounted for in that population proportions are computed on total student body, and the sample on first-time students only.

The data on ethnicity showed that it is easier to obtain ethnic data from students by telephone interview than on printed admissions forms. Statewide, 11.2 percent declined to state their ethnicity on a form with a range from 0.8 percent to 35.9 percent. By comparison, less than one percent of the sample declined to state their ethnicity in interviews. The range was from 3 percent to 0.0 percent. When the 11.2 percent "Decline to States" from the state data base were assigned to each ethnic group proportionally, the resultant state percentages were all within 1.3 percent of the SLS ethnic proportions.

With respect to age, the sample students, as expected, were younger than the population as a whole. The mean and median of the sample were 26.0 and 22.0 respectively; those of the total population were 29.0 and 25.0. For both the total sample and the state as a whole, the modal age was 18. Regardless of differences in central tendency, the shape of the two distributions was the same; each has an extreme positive skew. The discrepancies in measures of central tendency can be partially accounted for by the fact that the sample represents only first-time students. Further, more younger than older students transfer or leave the colleges in successive semesters.

Based on these data, small sampling is effective in making estimates of population parameters. State and federal reporting based on samples provides information as accurate as that provided by population figures. The slight discrepancies noted would be more than offset by the following:

1. Greater attention to detail than in the past would be possible in using small samples as estimates of population parameters.
2. It would be possible to provide more detailed information through the use of small samples than gathering a mass of data from college records. A system based on the SAM/COPES model of gathering information from sample colleges would result in a richer base of information collected at a substantially lesser cost than that involved in gathering information from total populations.

Further, it has been shown that telephone interviewing is both effective and inexpensive for data gathering. The integrity of the sample is protected by the high rate of response, and the cost of telephone interviewers is more than offset by the larger return rate and mailing costs of the questionnaire. Data show that the returns of this model are well within reasonable bounds when compared with population parameters.

Difficulties Experienced by Non-English-Speaking Students

Goal 5 addressed the difficulties experienced by students because their native language is not English.

Goal 5

To provide information on the factors within certain vocational programs that inhibit Limited-English-Speaking and Non-English-Speaking (LES/NES) students from enrolling.

Students with limited English speaking ability were identified on the telephone. Interviewers were instructed to listen for an accent indicating that the respondent's native language was not English, and to rank the respondent's ability on a three-point scale (No English, Limited English, Fluent English).

Respondents in the first category required the use of an interpreter; respondents in the second category either spoke hesitantly or spoke English which was not grammatically correct; respondents in the third category spoke standard grammatical English with few grammatical errors though with an accent.

Of the 6,051 students interviewed in the first semester, 839 or 14 percent were identified as having a foreign accent. Of these, only 22 (3 percent) spoke no English, 275 (34 percent) spoke limited English, and 542 (64 percent) spoke fluent English. The reader is reminded that the sample was collected before the influx of Southeast Asian immigrants. Because recent immigrants appear different from those in preceding years, the generalizability of the findings may be reduced.

Of those whose native language was other than English, (14 percent of the sample), almost 40 percent spoke an Asian language. Most of the balance were of Hispanic origin. On those campuses receiving an influx of Asian immigrants, the percentage of those speaking an Asian language is higher, affecting ESL and similar programs.

LESA students were asked if their family background was bilingual. The data show more Asians appeared to have problems than Hispanics. Further, there was a higher percentage of students with problems among those with a unilingual, rather than a bilingual, family background. Predictably, the largest number of those with problems were among those who spoke no English or only limited English. The problems encountered by members of this group were both academic and social.

Potential Bias in Community Colleges

The sixth goal addressed issues of sexism, racism, and other potential biases in community college programs. Explicitly, it was concerned with six special student groups:

1. Ethnic Minority Students
2. Physically Handicapped Students
3. Educationally Disadvantaged Students
4. Financially Disadvantaged Students
5. Displaced Homemaker Students
6. Students in majors non-traditional for their sex

Goal 6

To provide assistance in identifying needed curriculum and services for Vocational Education programs for disadvantaged and/or handicapped students, displaced homemakers, single heads of household, homemakers working part-time or for students enrolled in majors non-traditional for their sex.

Two kinds of data were collected on the six special groups:

1. Cross-tabulations on demographic, academic, and work variables.
2. A special anecdotal interview was conducted with each student who identified himself as having problems arising from his special group status.

The results of the cross-tabulations and the special interviews were given in detail in SLS Report, Part 4.

Anecdotes are not summarized in this final report because few students were cognizant of any special difficulties arising from their special group status. Though approximately 6,500 students were included in the SLS sample, few of the six special groups listed above had more than 10 students who saw problems arising from inclusion in one of these groups.

Student Prototypes

After studying the data collected by the SLS coordinators over two terms, the project's staff, together with a subset of the consortium, evolved a seventh goal. Though this goal has been described differently elsewhere, it is best stated as follows:

> 7. To develop and validate student prototypes that are based upon students' aspirations, enrollment patterns, and achievements. These prototypes should permit a realistic description of the mission and function of California Community Colleges.

During the Spring of 1980 the college coordinator assigned each sample student to one of 18 categories or student prototypes. For the final data collection, a question was asked of each subject to confirm his being placed in the prototype category to which he had been assigned. Of the total sample less than 10 percent disagreed with the assignment. Further, studies made at several colleges indicated that prototyping had greater than 80 percent reliability.

The 18 prototypes fall into three categories or college functions: the Transfer Function, the Vocational Function, and the Special Interest Function. Each of the 18 prototypes is briefly described below.

The Transfer Function

Of those students starting in community colleges in Fall 1978, about 37 percent assumed that they would transfer the credits earned to a baccalaureate-granting institution. Seven prototypes were identified to define the Transfer Function.

1. The Full-Time Transfer: This group represents both those who are eligible from high school to attend a senior institution and those who just missed eligibility. These students enroll in four or more courses and maintain a reasonable grade point average. They have a high probability of transferring after one to six semesters.
2. The Part-Time Transfer: This group is slightly older than the full-time student and is enrolled in three or fewer courses, frequently in the evening classes. They maintain a reasonable grade point average, but have slightly less chance of following through with their plans to transfer to a senior college than the full-time transfer.
3. The Undisciplined Transfer: This group aspires to transfer, but the probability of their doing so is slight. They lack either the academic skills to complete their work or the self-discipline to follow through on their studies and homework.
4. The Technical Transfer: This group is indistinguishable from the full- or part-time transfer student other than that they enroll in, and complete, a sequence of courses in a vocational area. The major is of relatively high status and technical, (for example, accounting, business, computer

sciences, engineering, or architecture). The Technical Transfer Student is frequently mistaken for a Vocational Student and, in any reasonable world of post-secondary education is, in fact, a Vocational Student.

5. The Intercollegiate Athlete: These are full-time students and indistinguishable from the Undisciplined Transfer Students other than their prime motive is to participate in the intercollegiate athletics program. Obviously, not all community college athletes fit in this category; only those that lack the discipline to achieve their transfer goals.

6. The Financial Support Seeker: This group, also, is indistinguishable in enrollment patterns and achievements from the Undisciplined Transfer Student. However, the real intent of this group is only to obtain financial aid. Few financial aid students fall into this group; only those that are more interested in obtaining money than in learning.

7. The Expediter: These are students whose main academic affiliation is with a senior college but find it more convenient to take one or two courses at the community college. During the summer there are many such students.

Of the seven transfer prototype groups described above, three represent slightly less than one percent each of the total sample: the Intercollegiate Athlete, the Financial Support Seeker, and the Expediter. When the Transfer Function is discussed, data on the Intercollegiate Athlete and the Financial Support Seeker is reported with the Undisciplined Transfer Students. The Expediters are reported with the Part-Time Transfer students.

The Vocational Function

About 36 percent of the total sample were classified as one of five vocational prototypes. This proportion does not include eight percent of the sample classified as Technical Major Transfers, though they spent much of their academic career in courses considered vocational. To be considered part of the Vocational Function, the students' intent was to use the vocational skills learned to find new employment in the areas of study, to maintain skills, licenses or certificates for their jobs, or to improve their skills in a job that they presently hold. Said another way, the students who were classified in a Vocational Function were expected to use the skills they learned immediately upon completing the courses or programs in which they were entered. The five vocational prototypes were:

8. Program Completer: These students enrolled in, and expected to complete, a specified program in vocational education; usually either a two-year associate degree or a one-year certificate program. Most of the students expecting to complete the associate degree spend more than two years in achieving their goals; this because of prerequisites to the programs or the scheduling difficulties in enrolling in the required courses.

9. The Job Seeker: These students, at least nominally, attend college only long enough to learn vocational skills that will permit them to obtain a semi-skilled to highly-skilled job. Again, nominally they are less concerned with earning good grades or getting credits for courses than in earning money as quickly as possible. There is some indication that this group contains a significant number of persons that lack the prerequisite skills, either academic or vocational, to complete a vocational program, and as a consequence, fall into a category analogous to the Undisciplined Transfer Student. (See number 3, above.)

10. The Job Up-Grader: These students, when admitted to the college, are already working in the field in which they take courses. They attend classes to improve their present skills or learn new, complementary skills; seeking raises, promotions or recognition. They are significantly older than the sample as a whole.

11. Career Changer: These students are employed, but wish to learn new job skills either to change careers or to supplement their incomes by obtaining an extra job for nights or weekends. They are older than the overall student body, enroll in one or two courses at a time, and are primarily evening students.

12. The License Maintainer: Many careers that necessitate state licensing or certification, (for example, registered nurses) require a specified number of hours of instruction on a regular basis to maintain the license. These persons frequently take community college classes to fulfill this requirement.

The License Maintainers represent less than one percent of the sample. When reporting on the Vocational Function, they are combined with the Job Up-Graders because they fit closer to this category than any other.

The Special Interest Function

Students falling into the Special Interest Function have been defined by six prototypes. However, these six can be subcategorized into two general groups: one group has a personal fulfillment goal (see 13, 14, and 15 below), learning something for the sake of learning or for a hobby. The second group is looking for solutions to explicit problems (see 16, 17, and 18 below), such as determining what vocational field to follow or improving their academic skills.

13. Leisure Skills Student: These students are concerned with learning specific skills to pursue their hobbies. The courses they take may be in the vocational area, for example, carpentry or photography; an individual sports area, for example, racquetball or golf; or an aesthetic area, for example, drawing or instrumental music. They are older than the group as a whole and most are enrolled in evening courses.

14. Education Seeker: A significant number of adults in California feel a vague discomfort if they are not enrolled in at least one reasonably academic course. They may have already earned advanced degrees, but they will still take an academic course on a regular basis, for example, anthropology, history or Spanish. They are the personification of the University of California Extension's motto, "lifelong learning."

15. The Art and Culture Student: This relatively small group seeks cultural experiences. They take courses in art or music appreciation or humanities courses that include attendance at concerts or theaters. They are frequently older or retired people, and few care about earning college credits.

16. Explorer/Experimenter: This group of students attends community colleges primarily to study themselves. They are exploring avenues of potential employment or desire a continuation of their education. Some take courses in psychology and personal development; others enroll in diverse subject matter courses, for example, one course in accounting and one in philosophy. They are usually part-time students, frequently women in the mid- to late-thirties.

17. Basic Skills Student: These students attend college to improve basic academic skills. Many are recent immigrants whose primary goal is to learn or improve their English. Others are recent high school graduates who wish to improve their basic language and math skills before pursuing an academic career.

18. Lateral Transfer: These students are taking courses prior to transferring to another institution other than a baccalaureate-granting college. The prerequisites they take are frequently for a vocational program offered elsewhere.

SUMMARY

This chapter has described the history and underlying reasons for conducting the Statewide Longitudinal Study. The goals and objectives have been stated together with a description of the degree to which it has been accomplished through the second year of the project. A précis of the results of the four previously published reports is given.

A seventh goal has been stated. It deals with a way of describing the community colleges' mission and function through a knowledge of student aspirations, enrollment patterns, and achievements.

Eighteen student prototypes have been described. They were subsumed under three college functions; Transfer, Vocational, and Special Interest.

The next chapter reports the research methods and procedures used for the project.

Chapter 2

Methods and Procedures

Many longitudinal studies are conducted to describe the long-range effects of a condition or a treatment on a well-defined population. The results are straightforward descriptions that answer questions about what happened, not why things happened. One can only speculate about the reasons for particular events. Thus, longitudinal studies often generate more questions than they answer. The data can be used to formulate innumerable research hypotheses. The SLS was one such study.

The Statewide Longitudinal Study identified and followed about 6,500 students for three years. Each student had enrolled in one of the 15 participating community colleges for the first time in Fall, 1978. The colleges represented the entire state, from the border of Mexico to Mt. Shasta. Data on the sample students were collected from two sources; college records, and structured telephone interviews. Though the formal statements of goals and objectives of the SLS appear in Chapter 1, the real purposes of the study were to determine who community colleges students were, why they enrolled, what they achieved, and, most important, how the community college experience affected their lives.

The design of the study created serious management problems. For each data collection, there were about 50 interviewers trained by 15 different coordinators separated by hundreds of miles. Even with two interviewers on the same campus, it is difficult to obtain reliability between them. As numbers and locations increase, the difficulties of collecting reliable data increase exponentially. Collecting, keying, and correcting data was an equally difficult task.

The result is that only three research procedures are worthy of description:

1. Sampling: Sampling of the colleges and sampling of students within each college.
2. Project Management: Project management as it deals with intercampus reliability.
3. Data Collection, Correction, and Analysis.

SAMPLING

Sampling deals with the selection of participating colleges, and the selection of participating students.

The Selection of Colleges

If one were to randomly select 15 colleges from the total of the 107 colleges in the state, the probability of obtaining a biased sample would be extremely high; if one selected half of the colleges, the standard error would still be plus or minus 10 percent. Therefore, an attempt was made to select a sample of 15 colleges that would be representative of the population in terms of the geography, the urban-rural dimensions, and the social class and ethnicity of the students. Though the 15 colleges selected appeared to be representative of the total population on these criteria, it was not until the student samples were selected and compared to the statewide population that verification of the representativeness was achieved. (The result of this comparison is reported in Chapter 1.) A brief description of each college is given below, with some indication of the ethnicity of the participating students. (The percentages do not sum to 100 percent because some students declined to state their ethnic background.)

Antelope Valley College

Antelope Valley College is in a semi-arid, sparsely populated area about 65 miles northeast of Los Angeles. The campus is rural, though there is major aircraft industry in the area, and a major Air Force base nearby. The area population is 88 percent White, 7 percent Hispanic, 2 percent Black, and the balance Other. The median family income for the area is $21,000.

Bakersfield College

Bakersfield College is in a major city in the San Joaquin Valley, an area dominated by large, conglomerate, agricultural and petroleum-related industries. Bakersfield itself has a population of about 100,000. The college population consists of 66 percent White, 20 percent Hispanic, 8 percent Black, 2 percent Native Americans, and 2 percent Asian.

Cerritos College

Cerritos College serves a heavily populated area in the southeast portion of Los Angeles County. Major colleges fed by the college include the Long Beach, Fullerton and Dominquez Hills campuses of California State University, and the University of California, Irvine. Businesses in the service area include manufacturing, services, retail and wholesale trade, and construction. Much of the manufacturing is in electronics. The college is 51 percent White, 18 percent Hispanic, 4 percent Black, 9 percent Asian, and 1.4 percent Native American.

Contra Costa College

The Contra Costa Community College District is contiguous with Contra Costa County, an area of 734 square miles with a population of approximately 600,000. Contra Costa College is one of three community colleges in the Contra Costa Community College District. It serves the western portion of the county along the northeastern shore of San Francisco Bay. The service area includes much light and medium industry, with the single largest employer being the refining and research branches of Standard Oil Corporation. The population is characterized by a broad socio-economic range. Contra Costa's enrollment of approximately 9,800 reflects this diversity. Ethnic representation in the enrollment is 25 percent Black, 10 percent Asian, 9 percent Hispanic, 1 percent Native American, 53 percent White, and 3 percent Other. One third of the students work thirty or more hours per week.

El Camino College

El Camino College is in a heavily populated "bedroom community" area of southwestern Los Angeles County. There are many industries and businesses in the area, but many of the residents commute to other parts of the county to work. The college is 64 percent White, 7 percent Hispanic, 18 percent Black, and 8 percent Asian.

Evergreen Valley College

Evergreen Valley College is in a semi-rural area in the eastern foothills of the San Jose District. The college serves some of the poorest areas in the district, in which the 1975 median income was $15,000. The area is 63 percent White, 22 percent Hispanic, 8 percent Asian, and 6 percent Black.

Foothill College

Foothill College is in the foothills above Los Altos, a luxurious suburban area in "Silicon Valley," heart of the electronics and computer industries. The population is upper-middle-class, 80 percent White and 20 percent minorities.

Golden West College

Golden West College, one of three campuses in the Coast Community College District, is a comprehensive community college located in Huntington Beach, California. The college has a service area of 105 square miles with a population of over 600,000. It is set in a highly developed suburban area approximately 50 miles southwest of central Los Angeles. The student enrollment is about 22,000, of which about 9,000 are evening-only, part-time students, and 4,500 are full-time, day students. It is a 122-acre campus with a staff of 240 full-time and 470 part-time instructors.

Imperial Valley College

Imperial Valley College is in a desert area largely devoted to irrigated agriculture. It is on the border of Mexico, about 120 miles over the mountains from San Diego. The ethnic composition of the college is 38 percent White, 56 percent Hispanic, 3 percent Black, and 2 percent Native American. Because of the agricultural nature of the district, there is a high porportion of Mexican immigrant students and of financially disadvantaged students.

Log Angeles City College

Los Angeles City College serves an urban area in Los Angeles that is severely depressed economically and characterized by poor housing, low income, high unemployment and high crime rates. Because of certain programs unique to the college, many of the students come from other areas of the city. The college is 22 percent White, 21 percent Hispanic, 30 percent Black, 17 percent Asian, and the balance Other. Because the "Boat People" immigrated after these figures were compiled, the proportion of Asians is now probably higher. The proportion of White students includes a number of Middle Eastern immigrants not classifiable as Hispanic, Black, or Asian.

Los Angeles Pierce College

Los Angeles Pierce College is in the west end of the San Fernando Valley, an area heavily populated with middle and upper-middle-class Caucasians. Over the last ten years, the college has had between 20,000 to 25,000 students per academic year. Approximately 82 percent were White, 6 percent Hispanic, 4 percent Black, 7 percent Asian, and the remainder, Other.

Sacramento City College

Sacramento City College is in a suburban area bounded by downtown Sacramento and a number of affluent suburban neighborhoods. Most of the local residents are either in government service or in trade. The college is 50 percent White, 16 percent Black, 10 percent Hispanic, 13 percent Asian, 1 percent Native American, and the balance "Decline to State."

Santa Ana College

Santa Ana College is in the urban center of the city of Santa Ana, and serves both impoverished areas and affluent suburbs. The median annual income is about $22,000. The ethnic composition of the college is 58 percent White, 24 percent Hispanic, 3 percent Black, and 2 percent Asian. The balance are "Other" or "Decline to State."

Shasta College

Shasta College is in a sparsely-populated rural area in northern California. The main campus is in the city of Redding, but programs are offered at seven rural outreach centers. The ethnic composition of the college is 86 percent White, 2 percent Hispanic, less than one percent Black or Asian, 2.5 percent Native American, and the balance "Decline to State."

Southwestern College

Southwestern College is in the southwestern corner of San Diego County adjacent to the Mexican border. In 1975, the median family income was $11,000, with 15,000 households reporting incomes of less than $7,000 a year. The college is 56 percent White, 5 percent Black, 21 percent Hispanic, many of whom are Mexican nationals, 9 percent Asian and the balance Other. For a large proportion of the Hispanic students, English is a second language. The fastest growing minority is Filipino, currently estimated at 7 percent of the population.

These 15 colleges appear to be representative of the 106 in the state. Figure 2-1 shows their geographic distribution. (The

CALIFORNIA COMMUNITY COLLEGE CAMPUSES

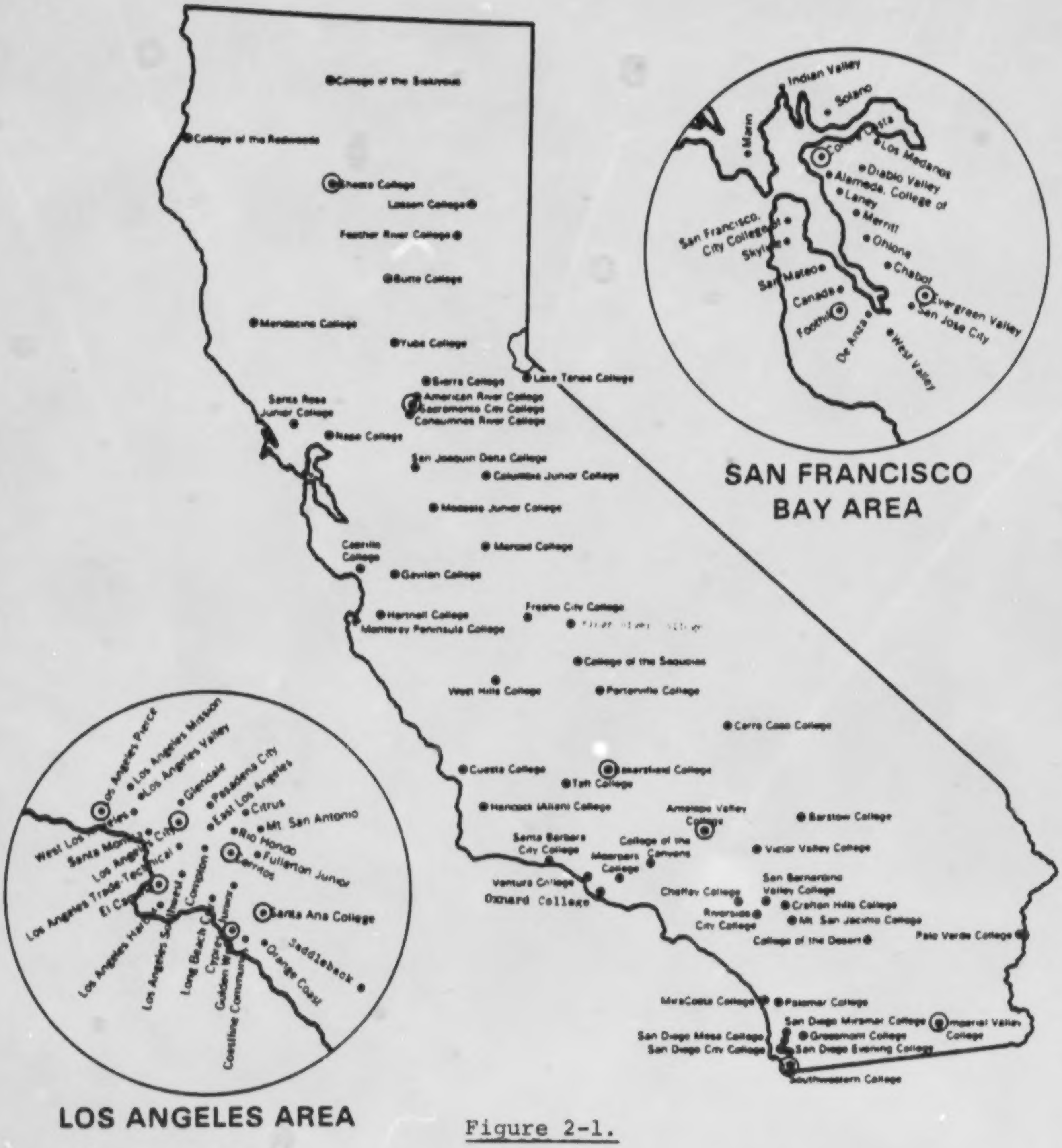
College of the Siskiyous
College of the Redwoods
Shasta College
Lassen College
Feather River College
Butte College
Mendocino College
Yuba College
Sierra College
Lake Tahoe College
Santa Rosa Junior College
American River College
Sacramento City College
Cosumnes River College
Napa College
San Joaquin Delta College
Columbia Junior College
Modesto Junior College
Merced College
Cabrillo College
Gavilan College
Hartnell College
Monterey Peninsula College
Fresno City College
Kings River College
College of the Sequoias
West Hills College
Porterville College
Cerro Coso College
Cuesta College
Bakersfield College
Taft College
Hancock (Allan) College
Antelope Valley College
Barstow College
Santa Barbara City College
College of the Canyons
Moorpark College
Victor Valley College
Ventura College
Oxnard College
Chaffey College
San Bernardino Valley College
Crafton Hills College
Riverside City College
Mt. San Jacinto College
College of the Desert
Palo Verde College
MiraCosta College
Palomar College
San Diego Miramar College
Imperial Valley College
San Diego Mesa College
Grossmont College
San Diego City College
San Diego Evening College
Southwestern College
Indian Valley
Solano
Marin
Contra Costa
Los Medanos
Diablo Valley
Alameda, College of
Laney
Merritt
San Francisco, City College of
Skyline
Ohlone
Chabot
San Mateo
Canada
Evergreen Valley
Foothill
San Jose City
De Anza
West Valley
SAN FRANCISCO BAY AREA
Los Angeles Pierce
Los Angeles Mission
Los Angeles Valley
Glendale
Pasadena City
East Los Angeles
Citrus
Mt. San Antonio
West Los Angeles
Santa Monica City
Rio Hondo
Los Angeles City
Fullerton Junior
Los Angeles Trade-Technical
Compton
Cerritos
El Camino
Los Angeles Southwest
Santa Ana College
Los Angeles Harbor
Long Beach City
Cypress
Golden West
Coastline Community
Saddleback
Orange Coast
LOS ANGELES AREA

Figure 2-1.

participating colleges are circled.) Of the 15 colleges, three are rural (Antelope Valley, Imperial Valley, and Shasta Colleges), four suburban (Evergreen, Pierce, Golden West, and Foothill Colleges), and the remainder either urban or on the urban side of the urban/suburban continuum.

The Selection of Students

The first decision of the consortium was to decide that each college would sample only those students enrolled for the first time in Fall, 1978. The alternative decision, sampling all students enrolled for the fall term, would have permitted broader generalizations about the total student body. However, sampling only first-time students increased the probability that a large proportion of the sample could be reached by telephone over a reasonable time. Said another way, a sample of the total student body would include a substantially larger proportion not enrolled the second semester and be more likely to move out of the area than the sample of firt-time students.

The second sampling decision of the consortium was to select samples from each college large enough to reduce the standard error to 4 percent. Because in the pilot study (Pierce College Longitudinal Study) almost half of the sample had no active units by census week, the consortium mandated that each college select a double sample, for example, to select twice as many first-time students as would be required for the desired sampling error.

Sample size was chosen using the total of "first-time freshman" as reported on form CCAF131, and selecting twice the number recommended in the SAM Manual (Gold, 1978) for the desired sampling error. Because the colleges differed in their procedures for admission, registration, and enrollment, there were differences in the proportions of the sample selected who were enrolled in classes at census week. The initial sample included students who were admitted but never registered, no-shows, and those who attended class, but dropped all their classes before census week. These persons who had Zero Active Units at census are referred to by the consortium as ZAUS (Students). ZAUS were interviewed during the first semester to determine the reason for their choosing not to participate in the community college classes. The results of these interviews are reported in SLS, Part 1.

The remainder of the selected sample, that is, those who were enrolled in one or more courses at first census week, were considered the sample students. The selection procedures used for each college are reported below. Also given are the number of sample students and the proportion of the total sample contributed by each college. These numbers and percentages refer to the 6,490 students used for the results reported in Chapters 3 through 6 of this report.

Antelope Valley College (N = 387, 6.0% of the sample)

The sample for Antelope Valley College was drawn using random number selection of first-time entering freshmen. Because of the required sample size, almost all entering freshmen were included in the sample.

Bakersfield College (N = 442, 6.8% of the sample)

Sampling procedures at Bakersfield College involved drawing every sixth name from a random, unsorted, non-alphabetical list of 1978 entering freshmen.

Cerritos College (N = 408, 6.3% of the sample)

The sample for Cerritos College consisted of newly admitted first-time students enrolled in at least one vocational course. Students were identified from the Standard Master Record for the college, a list of students in random order. Because of the sampling procedure, the sample is biased in favor of vocational students. This error occurred because of a last-minute change in project personnel.

Contra Costa College (N = 250, 3.9% of the sample)

The sampling procedure was designed to produce a sample with a 4 percent confidence interval of all new Contra Costa students for Fall, 1978. The sampling method was based on the reported randomness of the final two digits of the Social Security number used in the student's ID number at Contra Costa College.

El Camino College (N = 482, 7.4% of the sample)

The extended sample for El Camino College was drawn by first identifying those students who were first-time admittees in Fall, 1978, then drawing a set of random numbers. These were then matched with the student identification numbers, and the sample drawn.

Evergreen Valley College (N = 458, 7.1% of the sample)

The Evergreen Valley sample was drawn using the last digit of the student's Social Security number. Four numbers were chosen at random, and all students whose Social Security number ended with these digits were selected.

Foothill College (N = 486, 7.5% of the sample)
The Foothill College sample was drawn using the student's Social Security number. The first 500 students registered were not included in the sample because they were known to be foreign and might have biased the sample. The next 1,000 first-time students listed on the computer records were chosen.

Golden West College (N = 479, 7.4% of the sample)
Golden West College assigns each student a unique seven-digit identification number when a student first enrolls. In the Fall, 1978, the campus assigned 6,148 new identification numbers of which the first 720 were for summer session, 1978. A sequentially numbered list of the 5,428 first-time fall students was generated via computer. A random number generator on the computer then produced 725 random numbers between 1 and 5,428. After removing all students not enrolled at census week, 524 remained. Following the deletion criteria developed in Spring, 1979, 45 students were dropped from the sample leaving 479, the current sample size.

Imperial Valley College (N = 226, 3.5% of the sample)
To obtain the sample, the campus computer was programmed to select every third student from an alphabetical file of first-time admittees in Fall, 1978. The computer recycled through the list (after withdrawing students from the first cycle) until the desired sample size was obtained.

Los Angeles City College (N = 388, 6.0% of the sample)

Los Angeles City College students are identified by their Social Security numbers. To obtain the sample, random two-digit numbers were selected, and these were matched against the last two digits of student identification numbers on all first-time admittees in Fall, 1978.

Los Angeles Pierce College (N = 574, 8.9% of the sample)

The sampling at Pierce College was the same as for Los Angeles City College.

Sacramento City College (N = 339, 5.2% of the sample)

The Sacramento City College sample was selected by placing first-time, Fall, 1978 admittees in alphabetical order and selecting every eighth name. A second pass was made through the list in order to make up the sample, beginning with the fifth name on the master list.

Santa Ana College (N = 533, 8.2% of the sample)

The sampling procedure at Santa Ana College used the six-digit student ID number assigned at registration. The sample size required that 20 percent of all entering freshmen be chosen. Two one-digit numbers were selected at random, and all students whose ID number ended with these digits were chosen.

Shasta College (N = 502, 7.7% of the sample)

The Shasta College sample was chosen using the last two digits of the student's Social Security number. Enough numbers were chosen at random to provide a sample with a 4 percent confidence interval, and all students whose Social Security numbers ended with these digits were chosen.

Southwestern College (N = 539, 8.3% of the sample)

The sample at Southwestern College was drawn by selecting every fifth student who filed a new application for the Fall, 1978 semester.

Discussion of Sampling

In Fall, 1978, the total sample for the SLS was just over 8,000 students. This sample was compared to the population of all California Community College students on three demographic variables: age, sex, and ethnicity. On sex and ethnicity, the SLS sample was within 1 percent of the total college population. On age, the SLS sample was significantly younger, probably because they were first-time students, and the population included all attending students. Details of this comparison are given in SLS, Part 1 and summarized on pages 1-24 through 1-26 of this report.

Unfortunately, there was some misunderstanding about the sampling procedures at some of the colleges, and some arbitrary decisions made by the project directors in purging the sample. These are discussed below.

College Misunderstandings

Misunderstandings made at the participating colleges were largely due to changes in personnel. At one of the colleges the sample was selected from only that subset of first-time students who were enrolled in at least one vocational course. At two of the smaller colleges, there were so few new students that almost all who could be reached were used. These kinds of errors may have resulted in a biased sample selected from the respective colleges.

Purging of the Sample

There were two questionable management decisions used for the purging of the sample. The first occurred in the second data collection phase, Spring, 1979. It was decided to omit from the sample all students who had been unreachable[1] in Fall, 1978 and were not enrolled in the participating college in Spring, 1979. This decision was not uniformly implemented by all colleges, but reduced the sample size to about 7,500.

After the final data collection, there appeared to be 7,419 students in the sample, but many had been carried by the colleges with few data stored for them. For this final report all students failing to meet any of the following criteria were eliminated from the sample:

1. Data were available on at least two of the three demographic variables, Age, Sex, Ethnicity.
2. The student completed at least one credible interview.
3. The student had been assigned to a prototype. (See pages 1-29 to 1-34.)

Application of these criteria and the subsequent purging reduced the sample to its size, 6,490.

For many of the data collected during the structured interviews, only a portion of the total sample were queried. For instance, at times, different questions were asked of students whose intent was to transfer; those who wished to learn vocational skills and those whose prime motive in attending classes was for self-interest. As a consequence, though the total sample for this final report is 6,490, there are frequent occasions where the number of students on whom data are reported is considerably less.

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[1] For each data collection period, each student in the sample was described on the variables of Reachable and Cooperative as determined by whether a credible interview was completed.

PROJECT MANAGEMENT FOR INTERCAMPUS RELIABILITY

Though there are many aspects of management appropriate for discussion when dealing with a project of this magnitude, the present section will deal only with those management considerations that affect the reliability of the data. The reader is reminded that the project encompassed 15 colleges, separated by as much as 800 miles, and that about 50 interviewers were used for each data collection phase. Explicit techniques were instituted to improve the quality of the data, particularly techniques that encouraged communication to improve intercampus reliability.

Management Structure

The project was led by the director with the assistance of the project administrator. Other project office staff constituted a secretary and student assistants. All policy-level decisions were made by or concurred with by a consortium consisting of:

1. The coordinator in charge of the project for each of the 15 colleges.
2. Representatives of community college organizations whose function was relevant to the SLS, that is, Chancellor's Office, SCCCIRA, NOR CAL, R & D Commission of CCJCA, CACVE, CPEC, Center for the Study of Community Colleges, and the Graduate Schools of Education of UCLA and USC.

College coordinators frequently doubled as organizational representatives, for example, for some time the president of SCCCIRA was project coordinator for one of the colleges. The college coordinators and their assistants formed the nucleus of the consortium; some organizational representatives participated sporadically.

Project Communication

Communication within the consortium was accomplished with quarterly meetings, occasional regional meetings, and newsletters sent out on as "as-needed" basis.

The consortium met four times each year of the study: in June, September, December, and March. The June and December meetings were held to plan data collection for the next semester. Decisions made at these meetings dealt with both the general purpose of the next data collection and the specific variables on which data were to be collected. Following these meetings, project staff designed the data collection instruments and mailed draft copies to the college coordinators for correction. Producing the final copies of the data collection instruments often required several cycles of mailout and correction. Sometimes, field tests were made on draft instruments before the final Data Sheets were produced.

September and March meetings were held to discuss data collection problems. Sufficient colleges opened in late August to make an end-of-September date feasible for this purpose, and by March, spring data collection was under way. Regional meetings were held on an as-needed basis, generally for interviewer training or to deal with specific problems.

Newsletters were used to disseminate information to the consortium, for example, announcements of meetings, agendas, minutes of meetings, and errata. "Correction Sheets" were included with newsletters to bring college coordinators up to date on detailed changes in data collection instruments.

There were two separate mailing lists for consortium members: Primary, and Courtesy. The Primary list was restricted to college personnel responsible for data collection. The Courtesy list included all other members of the consortium.

Those on the Primary list received newsletters and all materials relating to data collection and data management. Those on the Courtesy list received the newsletters only.

Data Collection Instruments

The decision to collect information via telephone interview had been based both on the success of the pilot study and upon the recognition that better data can be obtained by telephone interview than by mail questionnaire. Because the response rate for telephone interviews is considerably higher than for mailed questionnaires, the responding sample is more likely to be representative of the population.

To increase the probability that common data were collected across campuses, the colleges were provided with Data Sheets, Interview Guides, and Manuals defining response categories. In addition, project staff sometimes assisted college coordinators in training interviewers in the use of the Data Sheets.

Data Sources

There were two sources of data for the SLS: the college records, and structured telephone interviews. The variables taken from the college records were demographic and academic, for example, courses, units, and grade points. The variables on which data were collected during the structured interview included educational, familial, and biographical background as well as the affiliation of students with any special group, for example, disadvantaged or handicapped. In addition, composite variables were developed that required several sources for classification of students. These included Vocational/ Non-vocational status, attendance during each semester, and Prototype status.

Other variables collected via telephone interview during the course of the study were student goals, judgement of goal attainment, and student evaluations of various campus services. Some variables, for example, job-skill level and hourly wage, were collected each semester.

Data Sheets

The results of all data collection were recorded on Data Sheets. Elements included for each variable were (1) Item number, (2) Item title and the question to be asked by the interviewer, (3) coded response categories, and (4) a space for the interviewer to record the code of the student's response.

Before each interview, the interviewers reviewed the student's file, filled in the college record data and familiarized themselves with the student's responses to previous questions. When the respondent was reached, they asked the printed question, writing down the answers on the Data Sheet. After the interview was complete, the responses were classified according to the definitions in the Manual (see below) and the appropriate code was recorded in the spaces provided.

Interview Guides

The Data Sheets for each term were accompanied by Interview Guides, a set of instructions for each item on the Data Sheet. These instructions included (1) the title of the item, (2) if an interview item, the question to be asked, (3) the purpose of the item, (4) instructions on how to deal with incomplete answers, (5) mention of the response categories and reference to the Manual (see below), and (6) instructions on how to enter the data on the Data Sheet.

Interview Guides were used during training of interviewers, and remained available for interviewers thereafter. They were not intended for use during the interview.

Manuals

Each semester's Data Sheet and Interview Guide was accompanied by a Manual containing definitions of response categories, (for example, Unskilled, Semi-skilled, Skilled, as related to Job-skill Level). Each set of definitions was referred to a particular item as it appeared on the Data Sheet and in the Interview Guide. The Manuals also contained instructions for the determination of SAM Major, SAM Matrix Code, and complete lists of CID Codes needed for the recording of Student Major information.

For Spring 1980, an additional manual, the Prototype Manual, was prepared for college coordinators. This manual defined Course Type and Prototypes and contained detailed instructions for determining Prototype.

Training of College Staff

Interviewers were trained by college coordinators, sometimes with the assistance of project staff. Regional (North/South) meetings were scheduled early in each semester for participating college coordinators, occasionally accompanied by interviewers. Project staff provided a review of each item and related instructional materials. Following this presentation, mock interviews were held to give participants practice with the documents. Further meetings of a similar nature were held by college coordinators on their own campuses.

These measures were designed to minimize the variance attributable to interviewer interpretation of instructions. Similar questions were asked by each interviewer on each campus, and similar decision rules were used in assigning responses to categories. Some variance in interviewer classification of responses remained, but it is believed to have been minimal.

THE COLLECTION AND CORRECTION OF DATA: DATA MANAGEMENT

In the context of the SLS, data management refers to keypunching of data onto cards, detection of errors, feedback to colleges, error correction, merging of data with previously collected data, and data analysis. When one deals with (1) hundreds of bits of data, (2) about thousands of students, (3) collected by more than

50 people, (4) at 15 different places, (5) at six different times, (6) over three years, these processes are more complex and difficult to accomplish than one might anticipate.

Keypunching

Keypunching was done on the individual college campuses, either directly from the Data Sheets of from specially prepared coding sheets. Those few colleges that lacked keypunch facilities forwarded coding sheets to the project office for keypunching. All data cards were to be verified before being submitted.

Error Types

Preliminary data analysis of Fall, 1978, data showed that there were errors on the cards arising from three sources:

1. Mechanics: Mechanical errors arose from improper input onto cards. Some campuses did not verify; others made errors in duplicating cards before shipment, resulting in either columnar gaps or in columnar shifts in data.
2. Illegal Character Errors: Illegal character errors arose from data gathering carelessness, misinterpretation of instructions, or ambigious instructions. This resulted in the use of characters that were illegal for a particular item.
3. Data Logic Errors: Data logic errors arose from the same causes as illegal characters, but required different detection techniques. These errors are logical impossibilities in the data, for example, a 19-year old male characterized as a Displaced Homemaker. Note that this type of error involves no illegal characters. The error for a given variable can only be identified through its relationship to some other variable.

Error Detection and Correction Procedures

Data storage and error detection, correction, and merging were performed by a college coordinator. Using computer programs, incoming data were scanned for mechanical errors, for illegal character errors, and for data logic errors. Error reports were mailed to the colleges showing cases containing errors, the type of error, and the column in which the error occurred. College coordinators made the necessary corrections and either mailed back new cards or returned the error sheets with corrections. When changes had been made on the data base, data for that college were checked a second time. College data were not merged with the permanent data file until all detectable errors had been removed.

Data management of a longitudinal study of this magnitude presents special problems. Despite the efforts expended on error detection, the data base remained dynamic during much of the conduct of the study. Quite frequently, errors due to ambiguity in instructions were detected after data were merged, and extensive error correction was required. Data detection and correction was an ongoing, cyclical process, despite the fact that the total number of errors remained well below 1 percent of the data base.

The continuous error correction process affected sample size in data analyses, causing the numbers to differ across variables and between tables in reports. It also created differences between data analyses performed on different dates. The differences due to this source were not great, and resulted in small differences in the relative frequencies and cross-tabulation cell percentages.

DATA ANALYSIS

Complex data analyses were never used for the SLS. All tables presented in SLS reports are derived from nothing more complex than frequency distributions and cross-tabulations. Even tests for the significance of differences between proportions have been avoided. Because the standard error of a proportion is inversely related to the size of the sample, when one has samples of thousands, small and meaningless differences can easily be defended as statistically significant, that is, not attributable to chance.

To date, the analyses for the project have been:

1. Comparing the SLS sample with the population of California Community College students. (SLS, Part 1.)
2. Describing the demographics, working characteristics, and academic production of the sample. (SLS, Part 1.)
3. Comparing Vocational Students with Non-vocational Students. (SLS, Part 2.)
4. Comparing Day and Evening Students. (SLS, Part 2.)
5. Comparing Attending and Non-attending Students. (SLS, Part 3.)
6. Determining the demographic and other characteristics of the seven special groups (ethnic minorities, physically handicapped, educationally and/or financially disadvantaged, limited English speaking, non-traditional majors and displaced homemakers). (SLS, Part 4.)
7. Describing the sample in terms of the prototypes developed during the course of the study. (SLS, Parts 2, 3, and 4.)

DISSEMINATION

Published reports were sent to more than 700 people in more than 125 educational institutions. Recipients included the following:

1. The California Community College Board of Governors.
2. Representatives of the State Chancellor's Office.

3. Research and other groups, including:

    a. Southern California Community College Institutional Research Association (SCCCIRA).

    b. Northern California Institutional Research Association (NOR CAL).

    c. The Research and Development Commission of California Community and Junior College Association (R & D Commission of CCJCA).

    d. California Postsecondary Education Commission (CPEC).

    e. California Advisory Commission on Vocational Education (CACVE).

    f. The Center for the Study of Vocational Education, Ohio State University.

    g. The Center for the Study of Community Colleges, Westwood, California.

    h. The ERIC Clearinghouse for Community Colleges, University of California, Los Angeles.

4. Chancellors of all multi-campus California Community College Districts.

5. Presidents or Superintendents of all California Community Colleges.

6. Deans of Vocational Education in the 107 California Community Colleges.

7. Interested members of the faculty of UCLA and USC.

8. Interested professionals by request. These consisted of the following:

    a. Institutional researchers on individual college campuses.

    b. Institutional researchers on California State College and University campuses.

    c. Attendees at conferences such as the American Educational Research Association, the Asilomar Conference of the R & D Commission of the CCJCA, the California Association for Institutional Research, and conferences of community college presidents, deans of vocational education, faculty senates, etc.

In addition, presentations were made by the Project Director, the Project Administrator, and members of the project consortium to conferences held by the American Educational Research Association, the California Community and Junior College Association, the California Association for Institutional Research, and a score of other faculty, administrative, and professional organizations.

SUMMARY OF CHAPTER 2

This chapter described the research methods and procedures used for:

1. The sampling of colleges and the sampling of students within each college.
2. Project management as it affected intercampus reliability, explicitly, management structure, the project communication, and the data collection instruments and data sources.
3. The cycle of data collection and correction and the dissemination of research findings.

PREFACE TO CHAPTERS 3 THROUGH 6

In Chapter 1 of this report the concept of student prototyping is described (see pages 1-29 through 1-34). The initial prototypes were completed in Spring 1980. During the interviews conducted in Fall 1981, respondents were asked to verify that they had been assigned to the correct prototypes. Only about 8 percent of the students disagreed with the prototype, and an additional 10 percent, though agreeing that the prototype described their original intent, said that they had changed.

A distribution of the final prototypes appears in Table 2-1. All tables in the next four chapters show cross-tabulations with some combination of these prototypes. Because there are some missing

Table 2-1. Final Prototypes

	Frequency	Percentage
Transfer Prototypes		
Full Time	689	10.6
Part Time	499	7.7
Technical	498	7.7
Undisciplined	601	9.3
Intercollegiate Athlete	48	0.7
Financial Support Seeker	21	0.3
Expediter	44	0.7
N =	2400	
Percent of Total Sample		37.0
Vocational Prototypes		
Program Completer	371	5.7
Job Seeker	876	13.5
Job Up-Grader	801	12.3
Career Changer	215	3.3
License Maintainer	45	0.7
N =	2308	
Percent of Total Sample		35.5
Special Interest Prototypes		
Hobbyist	807	12.4
Culture Seeker	64	1.0
Education Seeker	410	6.3
Explorer/Experimenter	257	4.0
Lateral Transfer	54	0.8
Basic Skills	190	2.9
N =	1782	
Percent of Total Sample		27.5

data for almost all of the variables considered, the numbers for each prototype may vary from table to table or within a single chapter.

Though the prototyping process was carefully explained to the college coordinators and was guided by a manual and a set of flow diagrams, the total process is best described as "systematic intuition." Some small amount of error variance remains in the final prototyping as suggested by Table 6-19 (9 percent of the Leisure Skills Students averaged three or more courses passed).

Several reliability studies were carried out, both interperson and intercollege. The results yielded reliability coefficients between 0.80 and 0.90. One source of error was due to coordinators' or interviewers' reluctance to relegate their students to unflattering prototypes (for example, the Undisciplined Transfer, the Intercollegiate Athlete, and the Financial Aid Seeker). Neither the present author nor the consortium will defend each of the prototypes assigned to the sample of 6,490 as completely reliable or valid. Nor are the list of prototypes considered comprehensive; many other prototypes could be described. However, because of the prototyping, the data in the following chapters permit a better description of California Community College students in terms of their aspirations, enrollment patterns, and achievements, than any previous study.

The following four chapters summarize the results of the SLS. Chapter 3 compares the three general functions of community colleges as determined by prototypes: Transfer Education, Vocational Education, and the Special Interest Function.

Chapter 4 deals with the Transfer Education Function only. The transfer students included in the analyses for Chapter 4 account for 37 percent of the total sample. The prototypes included are:

1. Full-time Transfer
2. Part-time Transfer and the Expediter
3. Technical Major Transfer
4. The Undisciplined Transfer Student in combination with the Financial Support Seeker and the Intercollegiate Athlete

Chapter 5 deals with the Vocational Function. For these analyses, 35.5 percent of the sample is included from the following prototypes:

1. Program Completers
2. Job Seekers
3. Job Up-Graders in combination with the License Maintainers
4. Second Careerists

Chapter 6 discusses the Special Interest Students. This group is a highly disparate mixture. These analyses use 27.5 percent of the sample, including:

1. The Hobbyist, the Culture Seeker, and the Education Seeker as a group
2. Lateral Transfer Students
3. Basic Skills Students
4. The Explorer/Experimenter

Chapter 3

The Sample

This chapter describes the total SLS sample, 6,490 students. There are three sections to the chapter:

1. The first tells who the students were and why they chose to take courses.
2. The second describes their accomplishments and achievements while attending college.
3. The third evaluates whether the community college experience made a difference in their lives.

The same format will be used for the following three chapters, that is, those describing the Transfer Students, the Vocational Students, and the Special Interest Students.

For this chapter each student in the sample was assigned to one of the three major college functions, Transfer, Vocational, and Special Interest. Throughout the chapter these functions will be compared and contrasted. Though the reasons for initial enrollment of students within each function were similar, each function contains students with a variety of motives and success/failure patterns. This diversity is described below to emphasize that the tables presented in this chapter represent a composite of sometimes extreme motives, abilities, and accomplishments.

The prototypes included in the Transfer Function (37 percent) were the Full and Part-time Transfer Student, the Technical Transfer

Student, the Expediter, as well as the Undisciplined Transfer, the Intercollegiate Athlete, and the Financial Aid Seeker. For many students in the Transfer Function, the probability of transfer to a baccalaureate-granting institution is extremely low.

The Vocational Function (35.5 percent) also contains students with a variety of motives and success patterns; the relatively successful Program Completers, Job Up-Graders, Career Changers, and License Maintainers, with the marginally successful Job Seekers, those students who want to learn skills quickly to get a job but are frequently unsuccessful.

The Special Interest Function (27.5 percent) is the most diverse of the three. More than 70 percent attend classes to learn hobby skills, to improve their knowledge of art and culture, or to take an academic course for their own edification--learning for the sake of learning. Of the remaining Special Interest Students, about 15 percent are exploring what to do with their lives vocationally and educationally, 10 percent seek only Basic Skills (primarily language and English as a Second Language), and about 5 percent are earning prerequisites for a transfer to another community college or trade school.

THE SAMPLE: WHO THEY ARE AND WHY THEY CAME

Though the total sample consisted of 6,490 students, most variables have some missing data. As a consequence, the numbers reported in the tables vary depending on the data source, the term during which the data were collected, and the nature of the questions asked.

Table 3-1 shows distributions of age at the project start, Fall 1978. Comparison of the distributions and the means indicate that the three functions represent decidedly different groups of students. For the Transfer Students, more than 70 percent were younger than 20, and 93 percent under 30. For the Vocational Students, 36 percent were younger than 20 and slightly less than 70 percent under 30. However, for the Special Interest group (an extremely diverse prototype group), just over 26 percent were younger than 20, 59 percent were younger than 30, but more than 10 percent were over 50. The variance for the Special Interest group was more than five times that of the Transfers, 31.77 to 175.24. In summary, Transfer Students are, by far, the youngest group, and Special Interest Students the oldest and most variable.

As age is related to people's needs, perceptions, desires, and achievements, so it is related to many of the variables collected for the SLS. This point was demonstrated dramatically in the SLS, Part 2, when Day and Evening Students were contrasted.

Table 3-2 reports the distributions of sex ratios showing significant differences among the functions. Though women represented 56.6 percent of the total sample, only half of the Transfer Function Students were female. Predictably, women constituted 62.3 percent of the Special Interest Function. In our society, women, particularly older women, are likely to have the time to pursue hobbies and cultural experiences. Further, they are more likely to have an opportunity, or out of necessity are forced, to explore further education and look for a vocation in their 30s and 40s. However,

Table 3-1. Total Sample: Age

Age	Transfer	Vocational	Special Interest	Total
	%	%	%	%
15 thru 19	70.6	35.9	26.6	46.2
20 thru 24	16.1	19.3	18.0	17.8
25 thru 29	6.2	13.1	14.6	11.0
30 thru 34	2.9	9.7	12.2	7.8
35 thru 39	1.6	7.3	7.2	5.2
40 thru 44	1.3	5.3	5.1	3.7
45 thru 49	0.5	3.9	4.9	2.9
50 thru Oldest	0.7	4.6	10.7	4.9
N =	2399	2306	1780	6485
Percent of Sample	37.0	35.6	27.4	
Mean	20.58	26.89	30.27	25.48
Standard Deviation	5.64	10.47	13.24	10.71
Variance	31.77	109.70	175.24	114.64

Table 3-2. Total Sample: Sex

Sex	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Male	49.6	41.4	37.7	43.4
Female	50.4	58.6	62.3	56.6
N =	2394	2305	1776	6475
Percent of Sample	37.0	35.6	27.4	

the relatively low proportion of women who were in the Transfer Function is inexplicable. The percentage of women in the Vocational Function is slightly higher than in the total sample. Further analyses and comments in the sex ratio of Transfer Students will be made in Chapter 4.

Table 3-3 describes the ethnicity of the sample. The proportion of the ethnic groups, when checked with total community college population of the state, was within 1 percent. There are no surprises in this table. About 69 percent of the total sample was Caucasian. The ethnic minorities in the sample have the same rank as their proportion in the population in California: Hispanic 13 percent, Black 8.4 percent, Asian 6.6 percent. Asians, though 6.6 percent of the total sample, were 8 percent of the Transfer Students. Hispanics were 13 percent of the total sample, but 14.2 percent of the Special Interest group, probably for English language skills. The ethnicity of the Vocational Students is, for each ethnic group, within 1 percent of that of the total sample. These findings will be further examined in the chapters that deal with each function.

Table 3-4 gives the distributions of responses to a question asked in the first interview (Fall 1978) concerning the last school attended. This variable, obviously related to age, indicates that the three functions represent distinct groups. While 62 percent of the total sample last attended a high school, 76 percent of the Transfers, 49 percent of the Special Interest, and 57 percent of the Vocational Students fit into this category. On the other hand,

Table 3-3. Total Sample: Ethnicity

Ethnicity	Transfer	Vocational	Special Interest	Total
	%	%	%	%
American Indian	0.7	1.0	1.2	1.0
Asian or Pacific	8.0	5.9	5.5	6.6
Black	9.3	9.5	5.9	8.4
Hispanic	12.5	12.5	14.2	13.0
White	67.7	69.5	71.5	69.4
Other	1.8	1.5	1.7	1.7
N =	2282	2196	1717	6195
Percent of Sample	36.8	35.4	27.7	

Table 3-4. Total Sample: Last School Attended

School Level	Transfer	Vocational	Special Interest	Total
	%	%	%	%
High School	76.2	57.4	49.0	62.0
Adult Night High School	1.3	2.8	3.2	2.4
Other Community College	12.2	21.8	20.6	17.9
Four-Year College	7.6	13.4	21.4	13.4
ROP-ROC	0.3	0.3	0.3	0.3
Other	2.4	4.3	5.5	3.9
N =	2195	2126	1636	5957
Percent of Sample	36.8	35.7	27.5	

though 13.4 percent of the total sample last attended a four-year college, only 7.6 percent of the Transfer Students fit into this category, while 21.4 percent of the Special Interest and 13.4 percent of the Vocational Students had last attended a senior college. These discrepancies are additional evidence of the differences in the students assigned to the three functions.

The data in Table 3-5 represent the responses to the question in the first interview asking for the students' highest grade level achieved. While 5.5 percent of the total group have a baccalaureate or higher degree, 10.5 percent in the Special Interest group fall into this category, 6.1 percent of the Vocational group, and only 1.0 percent of the Transfer group. The Special Interest group also contains almost twice the proportion of non-high school graduates (10.6 percent) as the Transfer group (5.8 percent). This range clearly indicates the conglomeration in the Special Interest group, that is, the relatively well-educated Hobbyists and the poorly educated Basic Skills Students.

Table 3-5. Total Sample: Educational Achievement Level

Educational Level	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Non High School Graduate	5.8	6.8	10.6	7.5
High School Graduate	72.4	57.1	43.9	59.1
Some College	17.6	23.3	26.0	21.9
AA Degree or Certificate	2.1	4.5	4.5	3.6
BA Degree	1.0	6.1	10.5	5.5
MA or Higher	0.2	1.5	2.9	1.4
Decline to State	0.9	0.7	1.6	1.0
N =	2209	2132	1655	5996
Percent of Sample	36.8	35.6	27.6	

Tables 3-6 and 3-7 give data on marital status and number of dependents. Considering the data on age, these tables hold no surprises. Transfer Students, previously described as very young, are naturally less likely to have been married or have dependents. Though, in the total sample, just over 61 percent were never married, 84 percent of the Transfers and 52 percent of the Vocational Students and only 42 percent of the Special Interest Students fit into this category. Other marital status categories contain expected percentages. More than 86 percent of the Transfer Students have no dependents, but only 64 percent of the Special Interest Students fit into this category. The other intervals follow the same trend.

Table 3-6. Total Sample: Marital Status

Marital Status	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Never Married	83.7	52.0	42.4	61.1
Married	11.5	36.0	45.7	29.6
Separated	0.7	2.0	1.2	1.3
Divorced	2.3	6.3	5.4	4.6
Widowed	0.1	0.8	1.2	0.7
Changed Status	1.7	2.9	4.0	2.8
N =	2297	2226	1705	6228
Percent of Sample	36.9	35.7	27.4	

Table 3-7. Total Sample: Number of Dependents

Dependents	Transfer	Vocational	Special Interest	Total
	%	%	%	%
0	86.4	66.5	64.1	73.2
1	6.1	11.7	13.1	10.0
2	3.7	10.1	10.9	7.9
3	1.8	6.5	6.1	4.7
More than 3	1.7	5.0	4.9	2.3
Decline to State	0.3	0.3	0.8	0.4
N =	2298	2228	1713	6239
Percent of Sample	36.8	35.7	27.5	

Tables 3-8 and 3-9 give data on the percentage of Financially and Educationally Disadvantaged Students. About 17 percent stated that they fell into each category. These data were collected in the Fall 1978, interview from responses to the questions, "Do you think money will be a problem for you while attending classes here?" and, "Do you think you will need any special help with things like math or reading?" Though there are no dramatic differences in the percentage of disadvantaged among the three functions, there is a smaller percentage of Financially Disadvantaged in the Special Interest groups (13.4 percent) and a larger proportion in the Transfer group (19 percent). The Vocational Students had the smallest percentage of educationally disadvantaged.

Table 3-8. Total Sample: Financial Disadvantage

Response	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Yes	19.0	16.5	13.4	16.6
No	80.9	83.4	86.2	83.3
Decline to State	0.1	0.1	0.4	0.2
N =	2266	2187	1681	6134
Percent of Sample	36.9	35.7	27.4	

Table 3-9. Total Sample: Educational Disadvantage

Response	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Yes	18.5	15.0	18.1	17.1
No	81.4	84.9	81.6	82.7
Decline to State	0.1	0.1	0.3	0.2
N =	2261	2184	1683	6128
Percent of Sample	36.9	35.6	27.5	

Table 3-10 gives the distributions of responses to a Fall 1978, interview question asking the reasons the student had enrolled in classes. (Because more than one reason was permitted, the columns sum to more than 100 percent.) Students' initial perception of their reason for attending college frequently seems to have changed. More than a quarter of the Transfer Students did not say they were preparing to transfer, about 20 percent of the Vocational Students saw no vocational motive in their initial enrollment, and almost a third of the Special Interest Students used reasons other than "Self-enrichment" to answer the question. These discrepancies do not invalidate the prototyping decisions. It is probable that Technical Transfer Students saw their prime motive in attending classes as preemployment training. Likewise, prototypes such as the Experimenter/Explorer and the Course Taker could project motives such as transferring or learning work skills as their major reason for attending.

Table 3-10. Total Sample: Original College Goals[1]

Goal	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Preemployment Training	27.4	52.6	21.4	34.9
Preparation for Transfer	72.7	14.4	16.1	36.6
In-service Training	4.7	21.5	7.5	11.0
Retraining	1.4	5.8	2.3	2.9
Self-enrichment	10.9	20.5	67.1	29.7
N =	1970	1971	1506	5447
Percent of Sample	36.2	36.2	27.6	

Table 3-11 describes the educational and vocational position of the sample students before they enrolled at the participating community college. These data were collected from responses to an interview question in Fall 1978. As expected, almost two-thirds of the Transfer Students had been full-time students, and a large proportion (37.6 percent) of the Vocational Students were employed full-time and were not attending school. Also expected, the largest proportion of Homemakers were in the Special Interest group.

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[1] Because more than one goal was permitted, the columns may sum to more than 100 percent.

Table 3-11. Transfer Sample: Occupational Status Previous to College Enrollment

Occupational Status	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Part-Time Student Part-Time Job	5.3	4.8	3.9	4.7
Part-Time Student Full-Time Job	3.8	6.6	6.4	5.5
Full-Time Job Only	16.0	37.6	39.4	30.1
Part-Time Job Only	3.9	5.5	5.1	4.8
Homemaker, not Employed	2.6	7.2	13.5	7.2
Full-Time Student, not Employed	32.3	17.9	12.1	21.6
Full-Time Student Part-Time Employed	31.7	14.7	11.9	20.2
Unemployed, not Student	4.4	5.9	7.7	5.8
N =	2180	2083	1633	5896
Percent of Sample	37.0	35.3	27.7	

Table 3-12 gives the distributions of self-reported employment during the first term of the project. More than half of the Transfer Students had unskilled or semiskilled jobs, and 26.8 percent chose not to work. On the other hand, almost a third of the Vocational Students had skilled or supervisory jobs, and only 15 percent were not employed by choice. The Special Interest Students had the largest proportion of supervisory jobs (11.5 percent), and the smallest proportion of students not employed (11.6 percent).

Table 3-12. Transfer Sample: Fall 1978 Occupational Level

Occupational Status	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Unskilled	23.1	12.5	12.5	16.4
Semiskilled	30.3	30.2	23.5	28.4
Skilled	11.6	24.4	19.4	18.3
Professional or Supervisory	1.7	7.4	11.5	6.4
Homemaker, not Employed	2.8	6.7	15.6	7.7
Student, not Employed	26.8	15.0	11.6	18.4
Other	3.6	3.7	5.9	4.3
N =	2176	2095	1633	5904
Percent of Sample	36.9	35.5	27.7	

In summary, the students who started California Community Colleges in Fall 1978, were relatively young, (though the distribution had an extreme positive skew), more than two-thirds were Caucasian, and almost 56.6 percent were women. About an equal proportion came to community colleges expecting to transfer to a baccalaureate-granting institution (37 percent) and expecting to learn or improve job skills (35.5 percent). The remaining 27.5 percent attended community college for self-interest reasons. A large portion of the self-interest group took courses to fill their leisure time, get help with hobbies, and to learn about cultural events. A second part of this group had special needs in basic skills or to explore their general life-space and make decisions about their educational and vocational future. Of the total sample, almost 70 percent were employed part or full-time in their first semester at a participating community college.

ENROLLMENT PATTERNS AND ACADEMIC ACHIEVEMENTS

This section describes the sample in terms of their enrollment patterns, courses, majors, units, and grade point average, contrasting students in the three functions.

Table 3-13 reports the enrollment patterns indicating continuous versus intermittent enrollment. The first interval shows that, for the total sample, 30.2 percent were enrolled for the Fall 1978, term only. The second interval shows that 10 percent were not enrolled the second term, but returned sometime during the course of the three-year study. Students in this interval could have returned for as few as one semester and as many as four.

Perusal of the table indicates that the students in the Transfer Function persevered a great deal more than Vocational or Special Interest Students. Only 13 percent of the Transfer Students left after one term, never to return, and some proportion of these may have been university-eligible and transferred. One-third of the Vocational Students and almost a half of the Special Interest Students left after one term. At the other end of the scale, 43.0 percent of the Transfer Students attended four consecutive terms or more, while 22.8 percent of the Vocational Students and only 10.2 percent of the Special Interest Students fell into that category.

Table 3-13. Total Sample: Enrollment Patterns

Enrollment Pattern	Transfer	Vocational	Special Interest	Total
	%	%	%	%
First Term Only	13.0	33.4	49.4	30.2
First Term Plus Return	10.6	10.6	11.9	10.0
First and Second Term Only	16.1	17.3	15.5	16.3
First and Second Term Plus Return	4.4	4.7	4.5	4.5
First, Second, and Third Term Only	9.2	9.0	6.4	8.3
First, Second and Third Term Plus Return	3.7	2.4	2.0	2.8
First 4 Consecutive Terms	14.8	8.1	4.4	9.6
First 4 Terms Plus Return	2.2	1.3	0.5	1.4
Five Consecutive Terms	8.3	5.0	2.1	5.5
Six Consecutive Terms	17.7	8.5	3.2	10.5
N =	2400	2308	1782	6490
Percent of Sample	37.0	35.6	27.5	
First Term Only	13.0	33.4	49.4	30.2
Continuous Enrollment[1]	66.1	48.0	31.6	50.2
Intermittent Enrollment[1]	20.9	18.6	20.0	19.6

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[1] Continuous enrollment means the student was enrolled in the first two or more terms without a break. Any break in the sequence of enrollment put the student in the intermittent category.

Table 3-14 shows the actual number of terms that the students in the three functions attended. (These data are not directly comparable to those in Table 3-13.) For Table 3-14, summer sessions were counted as 0.5, or half a term, making it possible for a student to have been in attendance for seven terms, that is, six semesters and two summer sessions. (And, indeed, 2.1 percent of the total sample, or well over 100 people, did so.) The table verifies the persistence of the students in the Transfer Function in that 53.1 percent attended four or more terms and 33.7 percent five or more terms. The same categories for Vocational Students are 27.5 percent and 17.7 percent; for Special Interest Students, 15.2 percent and 7.7 percent. The mode for the Transfer Students is 2.0 terms, as opposed to 1.0 for the other groups. The mean of the Transfer Function, 3.72 terms, is significantly higher than those of the Vocational or Special Interest Students.

There are many implications of these enrollment patterns. They will be discussed in the chapters that describe each of the three functions individually.

Table 3-14. Total Sample: Semesters[1] of Attendance

Semesters Attended	Transfer	Vocational	Special Interest	Total
	%	%	%	%
1.0	12.5	33.1	48.9	29.8
1.5	0.5	0.3	0.4	0.4
2.0	17.5	21.4	22.7	20.3
2.5	2.0	1.3	0.7	1.4
3.0	12.0	12.5	10.7	11.8
3.5	2.6	1.9	1.3	2.0
4.0	14.0	9.1	6.3	10.1
4.5	5.4	2.7	1.2	3.3
5.0	11.1	6.9	3.3	7.5
5.5	3.3	1.7	1.2	2.1
6.0	12.0	5.8	2.1	7.1
6.5	5.2	2.3	0.7	2.9
7.0	2.1	1.0	0.4	1.2
N =	2400	2308	1782	6490
Percent of Sample	37.0	35.6	27.5	
Mean	3.72	2.73	2.07	2.91
Standard Deviation	1.77	1.72	1.41	1.79
Percent Attending 4 or more Terms	53.1	29.5	15.2	34.2
Percent Attending 5 or more Terms	33.7	17.7	7.7	20.8

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[1] It was possible for sample students to attend two summer sessions, 1979 and 1980. To compute this table and those tables reporting Average Units and Average Courses Passed, each Summer Session was given the value of 0.5 or half a semester.

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Table 3-15 shows the proportion of students enrolled in courses that meet during the day, the evening, or both, for their first semester. Those who have both day and evening courses are usually day students who take a single course in the evening. This table shows about half the students are day students, with 14 percent taking courses at both times. However, 67 percent of the Transfer Students, 41.5 percent of the Vocational Students, and 37.3 percent of the Special Interest Students attended day classes only. The proportions are reversed, with 15.7 percent of the Transfer Students, 45 percent of the Vocational, and 52.3 percent of the Special Interest Students taking classes in the evening only. These data correspond to the previous findings that Transfer Students are more likely to attend full-time and most general education transfer courses are offered during the day.

Table 3-15. Total Sample: Class Hours

Class Hours	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Day	67.1	41.5	37.3	39.8
Evening	15.7	45.0	52.4	36.2
Both Day and Eve	17.2	13.4	10.3	14.0
N =	2363	2280	1751	6394
Total	37.0	35.7	27.4	

Several times during the study, interviewers were required to make judgments about each student's major. For Fall 1978, majors were recorded four different ways:

1. Major declared on admissions form.
2. Response to the interview question, "What's your major?"
3. Responses to the interview question, "For what job are you preparing?"
4. SAM major.[1] (Gold, 1981)

Table 3-16 shows the distributions of SAM majors for Fall 1978. For the total sample, note that 40.5 percent were classified as General Transfer or Personal Interest only. This means that almost 60 percent were enrolled in one or more vocational courses in Fall 1978. Almost 47 percent of the students in the Transfer Function and 43 percent of the Special Interest Students took vocational courses in the first semester of the study, while 18.6 percent of those students later classified in vocational prototypes were not then taking vocational courses.

During the course of the study, interviewers were periodically asked to assign each student a SAM matrix code[2] (Gold, 1980, page 24). The SAM matrix is 4 x 5 with the vertical axis describing

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[1] Early in the SAM study it was determined that the best way to identify vocational students was from courses they took. The SAM major was recorded in a four-digit CID code for all students enrolled in vocational courses. Those with no vocational courses were given a special code meaning either General Transfer or Personal Interest.

[2] Only former students are meant to be assigned a SAM matrix designation. The assignment is made according to an algorithm that considers the number of courses taken and the level of the vocational courses.

Table 3-16. Total Sample: SAM Major, Fall 1978

SAM Major, Fall 1978	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Agricultural and Natural Resources	2.1	2.0	1.9	2.0
Architectural and Environmental Design	1.4	1.0	0.5	1.0
Business and Management	20.5	33.1	16.7	24.1
Computer and Information Science	3.6	4.5	1.3	3.3
Education	2.3	1.6	2.0	1.9
Engineering and Related Fields	5.7	16.3	8.6	10.4
Fine and Applied Arts	3.5	2.2	4.8	3.4
Health Occupations	2.5	8.0	1.7	4.3
Home Economics	1.8	1.9	2.3	2.0
Public Affairs and Services	2.4	4.7	1.9	3.1
Commercial Services	0.1	3.0	0.4	1.3
Apprenticeship	0.6	3.1	1.1	1.6
General Transfer	45.0	12.3	15.4	23.9
Personal Interest	8.3	6.3	41.3	16.6
N =	1797	1882	1420	5099
Percent of Sample	35.2	36.9	27.8	

the degree of completeness of the students' studies, varying from a graduate to a non-completer. The horizontal axis classified the specificity of the students' vocational field on a four-point scale; from Class 1, a specific occupational major, to Class 4, non-occupational major.

Table 3-17 gives the distributions of the highest SAM classification on the horizontal axis, specificity of field. Only 49.1 percent of the Special Interest Students and 35 percent of the Transfer Students were consistently non-occupational. Said another way, more than half of the Special Interest and almost two-thirds of the Transfers were enrolled in vocational courses sometime during their stay at the community colleges. Though 11.7 percent of the Vocational Students were consistently categorized as non-occupational, only 17.3 percent of the Special Interest Students and 28.7 percent of the Transfer Students were categorized as having a specific occupational major, while 55.4 percent of the Vocational Students fit into this group. Over the length of the study, only 30.8 percent of the total sample were never classified as vocational.

Though only 35.5 percent of the total sample were assigned to a vocational prototype, the data from Tables 3-16 and 3-17 indicate that between 60 and 70 percent of students attending California Community Colleges enroll in one or more vocational courses. The implications of these data for vocational faculty and the administration of vocational programs will be discussed in Chapter 5.

Table 3-17. Total Sample: Highest SAM Class

Highest SAM Class	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Specific Occupational Major	28.7	55.4	17.3	35.0
Broad Occupational Area	19.5	20.1	14.2	18.3
Occupational Area not Determined	16.3	12.6	19.4	15.9
Non-Occupational Major	35.0	11.7	49.1	30.8
N =	2399	2305	1778	6482
Percent of Sample	37.0	35.6	27.4	

Table 3-18 gives the frequencies of the total number of courses passed, and Table 3-19 the number of courses passed per term. These tables show that the distributions of both the Vocational and the Special Interest Functions have extreme positive skews, that is, a large proportion of the students in these two functions pass relatively few courses, and a small proportion pass a large number of courses. Almost two-thirds of the students in the Vocational Function and 85 percent of the students in the Special Interest Function passed five courses or fewer. On the other hand, the Transfer Students have a relatively symmetric and platykurtic distribution for both total number and average number of courses passed. The means in both instances show that Transfer Students pass many more courses than the total sample, and the Special Interest Students pass the fewest.

Table 3-18. Total Sample: Number of Courses Passed

Number of Courses Passed	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Zero	7.8	20.8	30.9	18.8
1 - 5	23.7	44.5	54.2	39.5
6 - 10	18.6	17.3	8.8	15.4
11 - 15	14.9	7.1	3.7	9.1
16 - 20	13.7	5.1	1.3	7.2
21 - 25	12.5	3.1	0.6	5.9
26 - 30	6.0	1.7	0.2	2.9
31 and over	2.7	0.5	0.3	1.3
N =	2397	2308	1781	6486
Percent of Sample	37.0	35.6	27.5	
Mean	12.00	5.52	2.78	7.16
Standard Deviation	9.15	6.78	4.28	8.20

Table 3-19. Transfer Sample: Number of Courses Passed Per Term

Courses Passed Per Term	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Zero	9.1	22.9	33.1	20.6
1	13.6	34.0	41.0	28.4
2	18.0	17.8	13.7	16.8
3	17.9	12.1	6.7	12.8
4	20.0	6.9	3.3	10.8
5	12.3	3.6	1.2	6.2
6	5.8	1.9	0.5	2.9
7 and over	3.3	0.8	0.5	1.6
N =	2396	2305	1777	6478
Percent of Sample	37.0	35.6	27.4	
Mean	3.23	2.02	1.34	2.46
Median	3.02	1.3	0.91	1.56
Mode	4.0	1.0	1.0	1.0

Tables 3-20 and 3-21 give the distributions of the total number of units and number of units passed per term. These data reinforce the observations made from the previous tables, that is, Transfer Students pass a great many more units, and Special Interest Students significantly fewer units than the total sample. Again, the distributions of the Vocational and Special Interest Students are leptokurtic and positively skewed, while the distributions for the

Transfer Students are platykurtic and symmetric. Table 3-20 shows that 12.9 percent of the total sample passed more than 50 units. The Transfer Students had 25.6 percent with more than 50 units, Vocational 7.7 percent, and Special Interest 1.5 percent.

Table 3-20. Total Sample: Number of Units Passed

Number of Units Passed	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Zero	8.0	20.8	31.8	19.0
1 - 10	17.6	35.9	48.9	32.7
11 - 20	14.3	14.9	10.5	13.4
21 - 30	12.4	9.9	4.2	9.2
31 - 40	12.1	4.9	2.3	6.8
41 - 50	9.1	6.0	0.9	5.7
51 - 60	9.6	3.4	0.6	4.9
61 - 70	10.0	2.8	0.5	4.8
71 - 80	4.1	1.1	0.2	2.3
81 and over	1.9	0.4	0.2	0.9
N =	2400	2308	1781	6489
Percent of Sample	37.0	35.6	27.4	
Mean	31.96	15.71	6.64	19.23
Standard Deviation	24.15	18.90	10.85	21.97

Table 3-21. Number of Units Passed Per Term

Units Passed Per Term	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Zero - 1.5	12.0	26.7	47.0	26.8
1.6 - 3.5	10.0	25.2	26.8	20.0
3.6 - 5.5	11.4	13.1	10.7	11.8
5.6 - 7.5	12.5	10.4	6.8	10.2
7.6 - 9.5	14.4	8.5	3.8	9.4
9.6 - 11.5	13.3	6.2	2.1	7.7
11.6 - 13.5	11.9	4.6	1.7	6.5
13.6 - 15.5	7.8	3.4	0.3	4.2
15.6 - 17.5	4.3	1.1	0.4	2.1
17.6 - 19.5	1.5	0.3	0.1	0.7
19.6 and over	0.9	0.5	0.2	0.5
N =	2395	2306	1780	6481
Percent of Sample	37.0	35.6	27.5	
Mean	8.60	5.76	3.20	6.60
Median	8.70	3.35	1.72	4.14
Mode	8.50	0.75	0.75	0.75

Table 3-22 shows the proportion of units passed to units attempted. Differences among the three functions (Transfer, Vocational, and Special Interest) are almost equal; 0.85, 0.74, and 0.65. Units attempted represent those units associated with courses in which the student was enrolled after census week and for which he was seeking a regular grade, that is, A through F. These proportions represent important data if one is concerned with economics of post-secondary education. Less than two-thirds of the Special Interest group complete the units attempted, while Transfer Students complete 85 percent. Individual prototypes within the functions vary considerably and are reported in Chapters 4 through 6.

Table 3-22. Total Sample: Proportion of Units Passed

Total Sample Prototypes	Average Units Attempted	N	Average Units Passed	N	Proportion Units Passed
Transfer	37.33	2247	31.96	2400	0.85
Vocational	21.20	1842	15.71	2308	0.74
Special Interest	10.18	1176	6.64	1781	0.65
Total	25.62	5265	19.23	6489	0.75

Table 3-23 shows distribution of the cumulative grade point averages over the three years of the study. Though there are differences among the three functions, the discrepancies in grade point average are not as dramatic for other variables. Proportions of each function receiving a 4.0, or straight "A" average (not shown here), were 2.9 percent of the Transfer, 9.3 percent of the Vocational, and 19.6 percent of the Special Interest Students. A superficial examination of these data, and those shown in the highest interval of Table 3-23, would indicate that the Special Interest Students were the most academically proficient, which, indeed they may be. However, an artifact that partially accounts for why there were more than six times the percentage of Special Interest Students who received straight "A" averages than did Transfer Students appears in the previous five tables. More than half the Special Interest Students remain for two semesters or less, and 41 percent average one course per semester. Both the Transfer and the Vocational Students more nearly approximate the achievements of the conventional community college student.

Table 3-23. Total Sample: Grade Point Average

Grade Point Average	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Zero	1.4	1.5	2.4	1.6
0.1 - 0.5	0.7	0.7	0.5	0.7
0.6 - 0.1	2.6	3.0	3.9	3.0
1.1 - 1.5	3.9	3.5	3.5	3.7
1.6 - 2.0	12.7	14.4	14.9	13.8
2.1 - 2.5	21.2	15.5	12.2	17.2
2.6 - 3.0	27.6	27.4	24.3	26.8
3.1 - 3.5	18.8	17.2	11.8	16.7
3.6 - 4.0	11.2	16.7	26.5	16.5
N =	2208	1811	1140	5159
Percent of Sample	42.8	35.1	22.1	

To summarize the data, the students associated with the Transfer, Vocational, and Special Interest Functions are demonstrably and significantly different from each other in their enrollment patterns and achievements at community colleges. In enrollment patterns, Transfer Students persist longer and pass many more courses and units than those in the other two functions. Almost half of the Special Interest Students left after one semester and passed fewer than two courses. The Transfer Students attended primarily during the day, the Special Interest Students primarily during the evening, and the Vocational Students were split. For those students assigned a vocational major, regardless of which function they belonged to, Business and Management was the mode. Using the SAM criteria, about 70 percent of the total sample were considered vocational students at some time during their community college career. For all measurements dealing with the numbers of courses and units, Transfer Students scored highest, Vocational a close second, and Special Interest a poor third. This was not true for Grade Point Average; the Special Interest Students had the largest proportion in the interval indicating the highest grade point average, 3.6 to 4.0. However, this must be qualified in that a very large proportion of the Special Interest Students took only one course per semester. For each measure, the variation among the prototypes within each function is reported in Chapters 4, 5, and 6.

THE EFFECTS OF THE COMMUNITY COLLEGE EXPERIENCE

When dealing with the three major functions of community colleges, each comprising several prototypes, it is difficult to make blanket statements about the effectiveness of the community college experience. The criteria used to make the judgments must be general. For this section, evidence is presented that the jobs of the students improved and that the community colleges contributed to that improvement. Data is shown concerning students' transfer to baccalaureate-granting institutions and students' evaluation of the college.

Table 3-24 indicates the change in skill level of jobs from Fall 1978 and the academic year, 1980-81. The percentage of unskilled jobs was halved, and the percentage of skilled jobs increased from 18.3 percent to 28.6 percent. These changes were most extensive for students in the Vocational Function, but the jobs of students in all three functions changed for the better.

Table 3-25 shows the hourly wages for Fall 1978, and the academic year, 1980-81. Again, students in all three functions who were employed improved their salaries, the Vocational Students showing the greatest gain.

Table 3-24. Total Sample: Change in Occupational Status

Fall 1978

Occupational Level	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Unskilled	23.1	12.5	12.5	16.4
Semiskilled	30.3	30.2	23.5	28.4
Skilled	11.6	24.4	19.4	18.3
Professional or Supervisory	1.7	7.4	11.5	6.4
Homemaker, not Employed	2.8	6.7	15.6	7.7
Student, not Employed	26.8	15.0	11.6	18.4
Not Student, Unemployed	0.0	0.0	0.0	0.0
Other	3.6	3.7	5.9	4.3
N =	2176	2095	1633	5904
Percent of Sample	36.9	35.5	27.7	

1980-81

Occupational Level	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Unskilled	12.0	4.5	7.9	8.3
Semiskilled	31.9	28.8	20.9	27.9
Skilled	20.6	38.4	26.5	28.6
Professional or Supervisory	3.5	9.8	11.7	7.9
Homemaker, not Employed	2.1	5.2	14.8	6.5
Student, not Employed	24.3	6.2	5.8	13.0
Not Student, Unemployed	4.8	5.8	9.1	6.3
Other	0.6	1.2	3.3	1.5
N =	1557	1436	1070	4063
Percent of Sample	38.3	35.3	26.3	

Table 3-25. Total Sample: Hourly Salary

Fall 1978

Total Sample Prototypes	Mean	Standard Deviation	N
Transfer	3.95	2.06	1352
Vocational	5.15	2.88	1257
Special Interest	5.69	3.83	900
Total	4.83	2.98	3509

1980-81

Total Sample Prototypes	Mean	Standard Deviation	N
Transfer	5.76	3.15	963
Vocational	7.24	3.69	992
Special Interest	7.40	4.30	569
Total	6.71	3.72	2524

Mean Difference

Transfer	1.81
Vocational	2.09
Special Interest	1.71
Total	1.88

The previous tables indicated that the jobs held by the students in the sample were more highly skilled and paid better in the third year of the study than in Fall 1978. The following data indicate that the community college experience was, to a large extent, responsible for the improvement. Tables 3-26, 3-27, and 3-28 give such evidence.

Frequently during the project, respondents were asked whether their studies at the community college were related to their jobs. Table 3-26 is a summary of the responses to that question. Overall, 33.8 percent saw no relationship between studies and job, but only 16.5 percent of the Vocational Students so reported. For the total sample, 40.7 percent saw a great deal of relationship; 57.3 percent of the Vocational Students.

Table 3-26. Total Sample: Relationship Between Work and Study

Response	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Not at all	36.9	16.5	60.0	33.8
Slightly	6.5	3.4	6.8	5.3
Somewhat	20.6	22.8	15.3	20.3
A Great Deal	35.9	57.3	17.9	40.7
N =	1466	1704	948	4118
Percent of Sample	35.6	41.4	23.0	

Table 3-27 shows the responses of the students to the question asked during the final interview, "How do the courses help on the job?" Though students in the vocational sample consider their courses more helpful than do other students, the differences are not as dramatic as one might expect. The exception falls in the interval, "not related to job." More than 20 percent of the Transfer and Special Interest Students, but only 11.3 percent of the Vocational Students, used that answer.

Table 3-27. Total Sample: How Do Courses Help On the Job

Amount of Help	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Skills Part of Job	26.5	27.4	27.5	27.1
Major Part of Job	31.0	38.0	18.6	32.2
Completely Train	7.3	11.8	6.6	9.3
Helpful on Job	13.7	11.4	18.6	13.5
Not Related to Job	21.4	11.3	28.7	17.9
N =	742	944	334	2020
Percent of Sample	36.7	46.7	16.5	

During the Spring 1980, interviewed students were asked if their community college studies helped:

1. to get a job
2. on the job
3. with a raise
4. with a promotion

The results are presented in Table 3-28. As with the preceding tables, the Vocational Students saw the community colleges as more helpful than the Non-Vocational Students. However, a significant proportion of students in all three functions saw the community college studies as being helpful with their careers.

Table 3-29 shows the proportion of students who, during one of the interviews, indicated that they had transferred to a baccalaureate-granting college. Only 9.5 percent of the total sample, but 18.9 percent of the Transfer prototypes said they had transferred by the final interview. The percentages reported in Table 3-29 as having transferred are probably underestimates because they are limited by the number of students contacted when the transfer questions were asked. Said another way, the 18.9 percent of the 2,400 students in the total transfer function indicates that 454 (18.9 percent of 2,400) had responded affirmatively to the questions about having transferred. Because the denominator of the fraction (2,400) remains constant, any students not contacted who had transferred would increase the percentage. Further, a significant proportion of students were in attendance for the sixth, or last, term during which the project was carried out, Spring 1981. Overall, 19.3 percent were in attendance and 29.6 percent of the Transfer Students. It is a warranted assumption that most of the 29.6 percent in attendance would also transfer, so that almost 50 percent of those in the Transfer prototypes, including the Undisciplined Transfer, will eventually fulfill their goal of attending a baccalaureate-granting college. As one would expect, the percentages having already transferred and in attendance during

Table 3-28. Total Sample: How Study Helped With Career

A - HELP GET JOB	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Not at all	63.7	57.7	75.0	61.6
Somewhat	21.6	16.7	12.5	17.9
A Great Deal	14.7	25.6	12.5	20.5
N =	361	581	112	1054
Percent of Sample	34.3	55.1	10.6	
B - HELP ON JOB				
Not at all	36.4	21.1	27.6	26.9
Somewhat	41.3	28.4	37.1	33.6
A Great Deal	22.3	50.5	35.3	39.5
N =	349	592	116	1057
Percent of Sample	33.0	56.0	11.0	
C - HELP WITH RAISE				
Not at all	76.1	62.0	77.7	68.2
Somewhat	15.8	19.5	15.5	17.9
A Great Deal	8.1	18.4	6.8	13.8
N =	297	532	103	932
Percent of Sample	31.9	57.1	11.1	
D - HELP WITH PROMOTION				
Not at all	81.2	70.3	76.7	74.5
Somewhat	12.3	14.1	14.6	13.6
A Great Deal	6.5	15.6	8.7	11.9
N =	293	525	103	921
Percent of Sample	31.8	57.0	11.2	

Table 3-29. Total Sample: Has Student Ever Transferred?

	Transfer	Vocational	Special Interest	Total
	%	%	%	%
Had not transferred	81.1	96.8	95.1	90.5
Transferred	18.9	3.2	4.9	9.5
N =	2400	2308	1782	6490
Percent of Sample	37.0	35.6	27.5	
Percent Attending Spring 1981	29.6	16.3	9.3	19.3

the last semester, vary greatly among the Transfer prototypes. This variability is reported in Chapter 4.

During the third semester of the study, the students were asked to assign a grade to the college, A through F. Table 3-30 gives the distribution of grades assigned by the students in the different functions. There are no dramatic differences. Though the students in the Transfer Function assigned the smallest proportion of As, they have the largest proportion of Bs and no Fs. Overall, 84 percent of the sample assigned either an A or a B, indicating that the preponderance of those in the sample felt satisfied with the instruction and services supplied by the college.

Table 3-30. Total Sample: Student Grade of College

Grade	Transfer	Vocational	Special Interest	Total
	%	%	%	%
A Excellent	23.5	32.6	32.4	29.0
B Very Good	63.0	51.2	47.9	55.0
C Satisfactory	10.8	11.1	12.8	11.4
D Poor but Passing	0.9	0.8	1.8	1.1
F Failing	0.0	0.3	0.3	0.2
Unsure	1.9	4.0	4.9	3.4
N =	1272	1189	799	3260
Percent of Sample	39.0	36.5	24.5	

In summary, evidence shows that, by the end of the project, those students who were working while attending college held jobs requiring more skill and were paid higher salaries than they held in Fall 1978. These changes are partially attributable to their studies at the community college. Though the students assigned to the Vocational Function seemed to benefit most, students in both the Transfer and Special Interest Functions also improved their employment status as a result of their studies. Data indicate that a large and significant portion of Transfer Students were either already attending senior colleges or shortly would have transferred. Students assigned to all three functions rated their colleges very high.

These general criteria of success are expanded and supplemented by appropriate variables in the following three chapters, each of which deals exclusively with one function of the total sample; Transfer, Vocational, and Special Interest.

Chapter 4

The Transfer Function

This chapter examines the portion of the SLS sample whose main reason for attending community college was to transfer the credits they earned to a baccalaureate-granting institution. There were 2,400 students, or 37.0 percent of the total sample in the Transfer Function. Each student included in this function was classified as one of the seven transfer prototypes described on pages 1-29 through 1-31 and listed below:

Prototypes	Heading for Data Analysis
Full-Time	Full-Time
Technical	Technical
Undisciplined	Undisciplined
Intercollegiate Athlete	
Financial Support Seeker	
Part-Time	Part-Time
Expediter	

Because the Intercollegiate Athlete and the Financial Support Seeker represented a very small portion of the sample, their data are included with those of the Undisciplined Transfer Student, whom they resemble academically. Data for these prototypes are reported under the heading Undisciplined Transfer Student. For the same reason, data from the prototype Expediter are included under the Part-Time Transfer Student. As a result of these combinations, the tables for this chapter will compare and contrast four prototypes: The Full-Time, the Part-Time, the Technical, and the Undisciplined Transfer Student. The proportion that each represents will vary depending on the data available for each table.

THE TRANSFER STUDENTS: WHO THEY ARE AND WHY THEY CAME

Table 4-1 shows the distribution of age for the transfer prototypes. As reported in Chapter 3, the Transfer Students are, as a group, much younger than students assigned to the Vocational or Special Interest Function. Of the transfer prototypes, 81.8 percent of the Full-Time and 72.2 percent of the Undisciplined Transfer Students first enrolled in the participating colleges when they were under 20, and less than 5 percent of each group were 30 or older. The Part-Time Transfer Student has the smallest proportion under 20, 58.1 percent. Differences among prototypes in the average age are not meaningful.

Table 4-2 shows the sex ratio of the transfer prototypes. For the total sample, 56.6 percent were women, while only 50.4 percent of the Transfer Function were women. There are small, but significant, variations in sex ratios between the prototypes. The Part-Time Transfer had the largest proportion of women, 53 percent. The smallest proportion were in the Technical Transfer group, 46.7 percent. Many of the prestigious technical programs, for example, engineering, computer science, and architecture, may have a sex bias. One inference of these data supports the general contention that women are less likely to complete their education than are men.

Table 4-1. Transfer Sample: Age

Age	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
15 thru 19	81.8	67.5	58.1	72.2	70.8
20 thru 24	10.8	15.8	21.0	17.9	16.1
25 thru 29	2.8	8.3	10.3	4.8	6.2
30 thru 34	1.9	2.4	5.0	2.5	2.9
35 thru 39	1.3	2.4	1.7	1.2	1.6
40 thru 44	0.4	2.2	2.0	0.7	1.3
45 thru 49	0.4	0.4	0.7	0.3	0.5
50 thru Oldest	0.5	1.0	1.1	0.2	0.8
N =	688	495	542	669	2394
Total	28.7	20.7	22.6	27.9	
Mean	19.64	21.21	21.87	20.05	20.58
Standard Deviation	4.91	6.39	6.57	4.58	5.64
Variance	24.13	40.86	43.19	20.98	31.77

Table 4-2. Transfer Sample: Sex

Sex	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Male	48.8	53.1	47.0	49.9	49.6
Female	51.2	46.9	53.0	50.1	50.4
N =	686	497	542	669	2394
Total	28.7	20.8	22.6	27.9	

Table 4-3 shows the distributions of ethnicity. More Asians were in the Technical Transfer group and fewer Black and Hispanic students in the Full-Time Transfer group than their numbers warrant. The Full-Time Transfer group is dominated by Caucasians, 75 percent. The Black and Hispanic students make up a large proportion of the Undisciplined Transfer Students, 14.3 percent and 14.8 respectively.

Table 4-3. Transfer Sample: Ethnicity

Ethnicity	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
American Indian	0.5	0.9	0.8	0.8	0.7
Asian or Pacific	7.5	10.1	7.6	7.2	8.0
Black	5.3	9.4	8.3	14.3	9.3
Hispanic	9.8	13.3	12.4	14.8	12.5
White	75.0	64.2	69.5	61.1	67.7
Other Unspecific	2.0	2.1	1.4	1.9	1.8
N =	663	467	515	637	2282
Percent of Sample	29.1	20.5	22.6	27.9	

Tables 4-4 and 4-5 show the distribution of the Transfer prototypes' responses to the 1978 interview questions concerning the last school they attended and the highest grade level they attained. The Transfer Students last attended high school more frequently than students in either of the other two functions. However, within the Transfer Function, the Full-Time and Undisciplined Transfers lead in last attending high school, 84 percent and 78 percent. Of the

Table 4-4. Transfer Sample: Last School Attended

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
High School	84.4	74.2	65.1	78.2	76.2
Adult Night High School	1.1	1.8	0.8	1.6	1.3
Other Community College	8.3	14.0	15.8	11.9	12.2
Four-Year College	4.6	6.9	15.4	5.0	7.6
ROP-ROC	0.3	0.2	0.4	0.2	0.3
Other Unspecific	1.3	2.9	2.6	3.1	2.4
N =	635	450	495	616	2196
Percent of Sample	28.9	20.5	22.5	28.1	

Table 4-5. Transfer Sample: Prior Educational Level

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Non High School Graduate	4.1	4.7	5.6	8.8	5.9
High School Graduate	80.9	72.8	61.7	74.2	73.0
Some College	13.7	19.6	25.0	14.7	17.8
AA Degree or Certificate	1.3	2.0	4.0	1.5	2.1
BA Degree	0.0	0.9	3.4	0.3	1.0
MA or Higher	0.0	0.0	0.2	0.5	0.2
N =	635	448	496	612	2191
Percent of Sample	29.0	20.4	22.6	27.9	

Transfer group 7.6 percent last attended a four-year college; the Part-Time Transfer (and Expediter) accounted for most of these "reverse transfers"[1] and for the largest proportion last attending community colleges. The data on grade level are consistent in that the Full-Time Transfer Student group has the highest proportion of recent high school graduates, and the Part-Time Transfers have the highest proportion of AA and BA degrees.

Tables 4-6 and 4-7 show the data on marital status and numbers of dependents. The Full-Time Transfer, being the youngest, has the most "Never Married" (89.7 percent) and the fewest with no dependents (92.6 percent).

Table 4-6. Transfer Sample: Marital Status

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Never Married	89.7	80.9	74.7	86.6	83.7
Married	6.5	14.8	18.5	8.6	11.5
Separated	0.3	0.6	1.0	0.9	0.7
Divorced	2.0	2.1	3.3	1.8	2.3
Widowed	0.2	0.2	0.2	0.0	0.1
Changed Status	1.5	1.3	2.4	2.1	1.7
N =	662	467	518	650	2297
Percent of Sample	28.8	20.3	22.6	28.3	

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[1] Two studies are being conducted on data from the 800 students in the SLS sample who last attended four-year colleges. The initial results indicate few returned to the community colleges to earn degrees and transfer back to the university.

Table 4-7. Transfer Sample: Number of Dependents

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
0	92.6	85.0	80.6	86.6	86.7
1	3.5	5.8	9.5	6.5	6.1
2	1.7	4.3	4.5	4.6	3.7
3	0.8	3.0	2.7	1.4	1.8
More than 3	1.6	1.9	2.7	1.0	1.7
N =	661	467	516	649	2293
Percent of Sample	28.8	20.4	22.5	28.3	

Tables 4-8 and 4-9 show the frequencies of financially and educationally disadvantaged[1] among the transfer prototypes. Both types of disadvantage are most prevalent among the Undisciplined Transfer Student, 23 percent and 24 percent. The Full-Time Transfer Student has the lowest proportion of Financially Disadvantaged, 15 percent.

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[1] Operational definitions of "disadvantaged" are given on Page 3-10.

Table 4-8. Transfer Sample: Financially Disadvantaged

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Yes	15.1	21.0	18.2	22.6	19.1
No	84.9	79.0	81.8	77.4	80.9
N =	657	463	511	634	2265
Percent of Sample	29.0	20.4	22.6	28.0	

Table 4-9. Transfer Sample: Educationally Disadvantaged

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Yes	16.8	15.0	17.6	23.9	18.6
No	83.2	85.0	82.4	76.1	81.4
N =	656	461	510	633	2260
Percent of Sample	29.0	20.4	22.6	28.0	

Table 4-10 gives the distributions of answers to a Fall 1978, interview question concerning the students' reasons for taking classes. Because more than one reason was permitted, the columns sum to more than 100 percent.

The most interesting data from this table show that, though the assigned prototype assumed each student intended to transfer, many students did not see transferring their intent in Fall 1978. More than 27 percent said their reasons for attending college were other than, "Preparing to transfer." They chose instead "Pre-employment Training" (27.5 percent) and "Self-enrichment" (10.2 percent), either individually or in combination. It is evident that many of the Technical Transfers saw their major reason for attending as career related.

Table 4-10. Transfer Sample: Original Goal[1]

Educational Goal	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Preemployment Training	25.8	35.2	22.7	26.6	27.5
Preparation for Transfer	80.0	66.6	72.6	68.8	72.8
In-service Training	2.6	5.9	2.9	0.6	3.4
Retraining	0.5	0.9	2.4	0.6	1.2
Self-enrichment	8.0	7.8	11.1	15.0	10.7
N =	576	415	445	534	1970
Total	29.2	21.1	22.6	27.1	

Table 4-11 gives the distributions of work and school status before registering at the participating college. Of the Full-Time Transfers, almost three-quarters were full-time students the previous year, while only 9.3 percent held a full-time job without going to school. For the remaining three prototypes, these proportions are rather different; for the Technical Transfer, 65.1 percent; the Part-Time

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[1] See footnote, Page 3-12.

Transfer, 53.8 percent; and the Undisciplined Transfer, 60.3 percent, were full-time students. Holding a full-time job only, the respective proportions were: 18.1 percent, 21.8 percent, and 16.7 percent.

Table 4-11. Transfer Sample: Occupational Status Previous to College Enrollment

Occupational Status	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Part-Time Student Part-Time Job	3.8	4.9	6.3	6.2	5.3
Part-Time Student Full-Time Job	1.9	4.0	5.0	4.6	3.8
Full-Time Job Only	9.3	18.1	21.8	16.7	16.0
Part-Time Job Only	4.5	1.6	4.0	4.8	3.9
Homemaker, not Employed	1.3	2.7	4.4	2.5	2.6
Full-Time Student, not Employed	40.5	30.2	27.0	29.8	32.3
Full-Time Student Part-Time Employed	34.3	34.9	26.8	30.5	31.7
Unemployed, not Student	4.5	3.6	4.6	4.9	4.4
N =	627	447	496	610	2180
Percent of Sample	28.8	20.5	22.8	28.0	

Table 4-12 gives the distributions of Transfer Students' response to an interview question in Fall 1978, concerning their occupational status. About one-third of the Transfer group were not employed, 53.4 percent held unskilled or semi-skilled jobs, and 13.3 percent

percent skilled or supervisory jobs. Though there are not dramatic differences between the prototypes, there were many more skilled and supervisory jobs held by the Technical and Part-Time Transfer Students than by the Full-Time and Undisciplined Transfer Students. The Part-Time Transfer had the plurality of homemakers, 4.9 percent.

Table 4-12. Transfer Sample: Fall 1978 Occupational Level

Occupational Level	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Unskilled	27.1	18.2	17.8	27.0	23.1
Semiskilled	26.8	33.9	32.2	29.9	30.3
Skilled	6.7	14.3	16.2	11.0	11.6
Professional or Supervisory	0.8	2.7	2.8	0.8	1.7
Homemaker, not Employed	1.8	2.0	4.9	2.8	2.8
Student, not Employed	31.7	25.3	22.7	26.3	26.8
Other	5.3	3.6	3.4	2.1	3.6
N =	628	446	494	608	2176
Percent of Sample	28.9	20.5	22.7	27.9	

To summarize, Transfer Students are young; more than 70 percent entered community college under 20. There is a significantly smaller proportion of women in the Transfer Function than in the total sample. Fewer Full-Time Transfers come from the ethnic minorities than would be expected by chance. The transfers, particularly the Undisciplined Transfer, see themselves as needing more special assistance because of their educational and financial disadvantage than do other groups. When starting their college careers, more than a quarter of this group did not see themselves as Transfer Students. More than 73 percent of the transfers were Full or Part-Time Students prior to enrolling in the participating college, and two-thirds worked full or part-time during their first semester, Fall 1978.

ENROLLMENT PATTERNS AND ACADEMIC ACHIEVEMENTS

This section describes the academic achievements and enrollment patterns of the Transfer Students comparing and contrasting the prototypes.

Table 4-13 indicates proportions of students who were enrolled for a various number of terms consecutively or intermittently. For example, the third interval indicates 16.1 percent of all Transfer Students attended the first and second term only, while the fourth interval shows that 4.4 percent attended the first and second term, were not in attendance the third term, but returned for one or more semesters before the end of the study.

The Full-Time and Technical Transfers had signficantly greater proportions of students that attended four, five, and six consecutive terms than the Part-Time and Undisciplined Transfers. Attending the first term only, the Part-Time Students had 14.4 percent; the Undisciplined, 27.2 percent; while the Full-Time had only 3.5 percent; and, the Technical Transfers only 5.6 percent.

Table 4-13. Transfer Sample: Enrollment Patterns

Enrollment Pattern	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
First Term Only	3.5	5.6	14.4	27.2	13.0
First Term Plus Return	5.5	10.8	14.9	11.4	10.6
First and Second Term Only	12.9	12.4	19.2	19.6	16.1
First and Second Term Plus Return	2.3	3.6	6.6	4.9	4.4
First, Second, and Third Term Only	9.7	9.2	8.1	9.4	9.2
First, Second, and Third Term Plus Return	2.7	3.2	5.1	4.0	3.7
First 4 Consecutive Terms	26.3	16.5	8.3	7.0	14.8
First 4 Terms Plus Return	1.7	2.6	3.1	1.6	2.2
Five Consecutive Terms	10.0	12.2	6.4	5.1	8.3
Six Consecutive Terms	25.0	22.9	14.0	9.4	17.7
N =	689	498	543	670	2400
Percent of Sample	28.7	20.8	22.6	27.9	
First Term Only	3.5	5.6	14.4	27.2	13.0
Continuous Enrollment	83.9	73.5	56.0	50.4	66.1
Intermittent Enrollment	12.6	20.9	29.6	22.4	20.9

Table 4-14 gives the distributions of the total number of semesters attended by Transfer Students.[1] The Full-Time and Technical Students were the most persistent of any of the prototypes in the entire sample. There were 69.9 percent of the Full-Time Transfer Students, and 61.7 percent of the Technical Transfers who attended four or more semesters. Only 44.9 percent and 31.6 percent of the Part-Time and Undisciplined Transfers attended that long. These data substantiate and replicate the findings from the previous table.

Table 4-15 shows the time of day that classes were taken by Transfer Students during their first semester. Though there are no extreme differences, the Full-Time Transfer had a significantly higher proportion of day students (75.6 percent) and a lower proportion of evening students (6.2 percent) than did the other Transfer prototypes.

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[1] See footnote 1, Page 3-16.

Table 4-14. Transfer Sample: Semesters[1] of Attendance

Semesters Attended	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
1.0	3.3	5.4	13.4	26.3	12.5
1.5	0.1	0.2	0.9	0.7	0.5
2.0	12.5	12.2	20.6	23.9	17.5
2.5	1.5	2.6	2.4	1.9	2.0
3.0	10.0	10.6	15.1	12.7	12.0
3.5	3.0	1.8	2.6	2.8	2.6
4.0	20.0	15.3	12.0	8.4	14.0
4.5	7.0	6.8	4.2	3.6	5.4
5.0	11.9	15.9	11.4	6.4	11.1
5.5	4.1	3.8	2.2	2.8	3.3
6.0	16.3	16.7	9.9	5.7	12.0
6.5	6.8	6.4	3.7	3.7	5.2
7.0	3.5	2.2	1.5	1.0	2.1
N =	689	498	543	670	2400
Percent of Sample	28.7	20.8	22.6	27.9	
Mean	4.32	4.24	3.47	2.91	3.72
Standard Deviation	1.57	1.62	1.72	1.75	1.77
Percent Attending 4 or more Terms	69.6	67.1	44.9	31.6	53.1
Percent Attending 5 or more Terms	42.6	45.0	28.7	19.6	33.7

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[1] See footnote 1, Page 3-16.

Table 4-15. Transfer Sample: Class Hours

Class Hours	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Day	75.6	63.2	60.5	66.7	67.1
Evening	6.2	17.8	26.6	15.0	15.7
Both Day and Evening	18.2	19.0	12.8	18.3	17.2
N =	677	484	537	666	2364
Percent of Sample	28.6	20.5	22.7	28.2	

Table 4-16 gives the distribution of the SAM majors[1] assigned during the Fall 1978, semester. Overall, 45.6 percent of the Transfer Students were categorized as General Transfer, 8.4 percent as attending for personal interest, and the remaining 46 percent as occupational majors. Though there were no extreme differences among the Transfer prototypes, the Technical Transfers had the lowest proportion assigned a General Transfer major (35.2 percent). For all four prototypes, Business and Management majors were most numerous of the vocational majors assigned. The Technical Transfer had a significantly higher proportion of Business and Management Students than the other groups.

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[1] See footnote 1, Page 3-20.

Table 4-16. Transfer Sample: SAM Major, Fall 1978

SAM Major Fall 1978	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Agricultural and Natural Resources	3.6	1.8	1.0	1.6	2.1
Architectural and Environmental Design	1.1	2.4	1.0	1.5	1.4
Business and Management	20.3	25.1	19.3	18.8	20.5
Computer and Information Science	3.4	6.0	3.9	2.0	3.6
Education	1.9	3.0	2.9	1.8	2.3
Engineering and Related Fields	3.6	9.9	4.2	6.4	5.7
Fine and Applied Arts	3.6	4.8	2.1	3.7	3.5
Health Occupations	2.3	2.1	3.4	2.4	2.5
Home Economics	1.9	1.2	1.8	2.2	1.8
Public Affairs and Services	2.1	3.3	1.8	2.7	2.4
General Transfer	48.5	35.2	46.7	48.4	45.6
Personal Interest	7.9	6.0	11.7	8.5	8.4
N =	532	335	383	547	1997
Percent of Sample	29.6	18.6	21.3	30.4	

Table 4-17 gives the distributions of Transfer Students for the highest SAM Class[1] assigned during the study. As expected, 92 percent of the Technical Transfers had been assigned vocational status. However, an unexpected 65 percent of the total group had, during one of the five data collection periods, been assigned as an Occupational Student. The implications of these data will be discussed in Chapter 5, the Vocational Function.

Table 4-17. Transfer Sample: Highest SAM Class

Highest SAM Class	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Specific Occupational Major	29.7	50.8	18.7	19.1	28.7
Broad Occupational Area	15.8	30.5	17.0	17.4	19.5
Occupational Area not Determined	17.4	10.6	16.3	19.3	16.3
Non Occupational Major	36.9	8.0	48.1	44.2	35.0
N =	689	498	542	670	2399
Percent of Sample	28.7	20.8	22.6	27.9	

Table 4-18 shows the distributions of the number of courses passed by Transfer Students. There are considerable differences among the prototypes at each interval. For the Undisciplined Transfer, 62.1 percent passed five or fewer courses, while 38.3 percent of the

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[1] See footnote 2, Page 3-20.

Part-Time Students, 19.1 percent of the Technical, and only 5.4 percent of the Full-Time Transfers fit into those intervals. At the other end of the scale, 43.7 percent of the Full-Time Students, 26.5 percent of the Technical Students, 8.4 percent of the Part-Time Students, and only 4.7 percent of the Undisciplined Transfers passed more than 20 courses. The means verify the trends with the Full-Time Transfer averaging 18.51 courses and the Undisciplined Transfer 5.90.

Table 4-18. Transfer Sample: Number of Courses Passed

Number of Courses Passed	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Zero	1.0	2.4	4.2	21.7	7.8
1 - 5	4.4	16.7	34.1	40.4	23.7
6 - 10	14.6	18.7	25.0	17.3	18.6
11 - 15	14.8	16.5	19.3	10.3	14.9
16 - 20	21.4	19.3	9.0	5.5	13.7
21 - 25	25.6	15.1	5.2	3.1	12.5
26 - 30	11.9	9.2	1.7	1.2	6.0
31 and over	6.2	2.2	1.5	0.4	2.7
N =	687	498	543	669	2397
Percent of Sample	28.7	20.8	22.7	27.9	
Mean	18.51	14.36	9.10	5.90	12.00
Standard Deviation	8.02	8.54	7.19	6.79	9.15

Table 4-19 shows the distribution of the average number of courses passed per term. These data replicate the findings discussed above. The mode for the Undisciplined was zero, for the Part-Timer, two; for the Full-Time and Technical Transfers, the mode was four courses passed per semester.

Table 4-19. Transfer Sample: Number of Courses Passed Per Term

Courses Passed Per Term	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Zero	1.2	2.8	5.2	25.3	9.1
1	1.3	10.9	19.7	23.3	13.6
2	6.0	19.4	27.8	21.4	18.0
3	16.0	19.6	24.1	13.6	17.9
4	31.0	22.8	14.2	11.5	20.0
5	23.1	17.3	5.5	3.0	12.3
6	13.4	4.4	2.4	1.6	5.8
7 and over	8.1	2.8	1.2	0.3	3.3
N =	688	496	543	669	2396
Percent of Sample	28.7	20.7	22.7	27.9	
Mean	4.28	3.38	2.63	2.03	3.23
Median	4.32	3.36	2.4	1.57	3.02
Mode	4.0	4.0	2.0	0.0	4.0

Tables 4-20 and 4-21 give the distributions of the number of units passed and units passed per term. Well over half of the Full-Time Students and more than one third of the Technical Students passed 50 or more units; less than 9 percent of the Undisciplined Transfers fell in this group. For the units passed per term, the mean for the Undisciplined Student is 5.07; for the Part-Timers 7.35; for the Technical Transfer, 9.07; and for the Full-Time Transfer, 11.35. Indeed, 54.7 percent of the Full-Time Students passed more than 11.5 units per term, while only 5.2 percent of the Undisciplined fell in this category. The Full-Time Transfer averages more than twice as many units per term than the Undisciplined Transfer.

Table 4-20. Transfer Sample: Number of Units Passed

Number of Units Passed	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Zero	1.2	2.6	4.1	22.1	8.0
1 - 10	2.6	11.8	22.8	33.1	17.6
11 - 20	6.5	13.4	21.2	17.2	14.3
21 - 30	11.2	13.0	16.8	9.6	12.4
31 - 40	13.5	12.6	14.2	8.5	12.1
41 - 50	12.6	11.8	7.6	4.6	9.1
51 - 60	16.0	12.0	7.2	2.9	9.6
61 - 70	21.5	12.2	4.2	1.4	10.0
71 - 80	10.1	8.4	1.5	0.4	5.1
81 and over	4.7	1.8	0.6	0.0	1.9
N =	689	498	543	670	2400
Percent of Sample	28.7	20.8	22.6	27.9	
Mean	49.09	38.50	25.48	14.74	31.96
Standard Deviation	20.73	23.48	19.23	16.61	24.15

Table 4-21. Transfer Sample: Number of Units Passed Per Term

Units Passed Per Term	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Zero - 1.5	2.0	6.2	6.8	30.6	12.0
1.6 - 3.5	1.7	8.2	12.9	17.5	10.0
3.6 - 5.5	2.6	9.9	18.0	16.0	11.4
5.6 - 7.5	4.8	13.1	18.6	14.9	12.5
7.6 - 9.5	15.3	14.5	19.2	9.6	14.4
9.6 - 11.5	18.8	16.3	12.5	6.0	13.3
11.6 - 13.5	22.0	15.5	6.1	3.7	11.9
13.6 - 15.5	17.2	10.3	2.4	0.9	7.8
15.6 - 17.5	10.3	3.8	1.7	0.4	4.3
17.6 - 19.5	3.1	1.4	1.3	0.1	1.5
19.6 and over	2.1	0.8	0.6	0.1	0.9
N =	686	497	543	669	2395
Percent of Sample	28.6	20.8	22.7	27.9	
Mean	11.35	9.07	7.35	5.07	8.60
Median	11.94	9.24	6.82	3.74	
Mode	12.5	10.5	8.5	0.75	8.5

Table 4-22 gives the proportion of units passed to units attempted for each transfer prototype. The Full-Time, Technical, and Part-Time Transfer Students passed between 0.88 and 0.92 of the units they attempted, while the Undisciplined Transfer Students passed only 0.72. These proportions of units passed are of those units for which the student was enrolled at the census weeks and sought a regular grade, A through F.

Table 4-22. Transfer Sample: Proportion of Units Passed

Transfer Sample Prototypes	Average Units Attempted	N	Average Units Passed	N	Proportion Units Passed
Full Time	53.48	683	49.09	689	0.92
Technical	43.03	486	38.50	498	0.89
Part Time	28.82	523	25.48	543	0.88
Undisciplined	20.48	555	14.74	670	0.72
Total	37.33	2247	31.96	2400	0.85

Table 4-23 gives the distribution of the Grade Point Average for the transfer prototypes. As expected from the previous data, the Undisciplined Transfer scores the lowest and the Full-Time Transfer the highest. The fact that 12 percent of the Undisciplined Transfers had a Grade Point Average greater than 3.0, that is, averaged more than a "B", is not surprising considering that more than 40 percent passed between one and five courses in the three-year study, and 44.7 percent averaged one or two courses each semester.

In summary, the transfer sample was the most persistent in terms of enrollment with only 13 percent leaving and not returning after the first term. More than half attended four or more terms and more than a third, five or more terms. The Full-Time Transfer was, by far, the most persistent, and the Undisciplined Transfer the least

Table 4-23. Transfer Sample: Prototypes by Grade Point Average

Grade Point Average	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Zero	0.3	0.2	0.2	4.9	1.4
0.1 - 0.5	0.0	0.0	0.2	2.6	0.7
0.6 - 1.0	0.4	0.6	1.0	8.6	2.6
1.1 - 1.5	0.9	1.9	1.9	11.4	3.9
1.6 - 2.0	4.7	11.4	10.7	26.1	12.7
2.1 - 2.5	20.3	22.3	23.5	19.1	21.2
2.6 - 3.0	34.6	31.0	28.2	15.2	27.6
3.1 - 3.5	25.6	20.5	21.0	6.4	18.8
3.6 - 4.0	13.2	12.2	13.4	5.6	11.2
N =	676	484	515	533	2208
Percent of Sample	30.6	21.9	23.3	24.1	

persistent. The transfer sample were primarily daytime students, with only 15.7 percent taking evening classes only. The Part-Time Transfer was the most likely to attend evenings, 26.6 percent. Amost two-thirds of the transfer sample were considered occupational students (using the SAM criteria) at some time during the project.

Almost half were given an occupational major during the first semester, 20 percent in Business and Management. Students in this function passed the most courses and units and averaged the most courses and units per term. They completed 0.85 of the units they attempted and, in general, maintained a reasonable and acceptable

Grade Point Average. The Undisciplined Transfer was the exception to most of the above generalizations.

THE EFFECTS OF THE COMMUNITY COLLEGE EXPERIENCE

In theory, it is a simple matter to judge the effectiveness of the community college in assisting Transfer Students to achieve their goal; in fact, it is a difficult task. The single criterion should be the proportion of students who transfer to a baccaluareate-granting college, but the difficulty is in determining whom to include in the proportion. At the end of the project, in Fall 1981, a count was made of those Transfer Students who, during any of the five interviews, indicated they had transferred. The percentages are given in Table 4-24. The percentages reported in this table represent the lowest possible percent that could have transferred. A percentage or proportion represents a fraction, in this instance the fraction of students who had reported that they transferred. The denominator of the fraction, total number of students in the transfer sample (2,400), remains a constant. The numerator represents the number of students contacted and having creditable interviews who reported that they were attending a baccalaureate-granting institution. In no data collection period were all 2,400 students in the Transfer Function interviewed. During the academic year, 1980-81, when the fifth and final interviews were conducted, 64 percent of the sample were contacted. It is safe to assume that some students who transferred were not interviewed after transferring, and, therefore, not included in the numerator. Consequently, the 18.9 percent of the transfer sample who had reported that they transferred during one of the five interviews

Table 4-24. Transfer Sample: Proportion of Students Who Transferred

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Had not Transferred	67.9	83.9	81.0	92.5	81.1
Transferred	32.1	16.1	19.0	7.5	18.9
N =	689	498	543	670	2400
Percent of Sample	28.7	20.8	22.6	27.9	
Percent Attending Spring 1981	31.9	37.4	30.2	21.3	29.6

is the smallest percentage that could have transferred. To consider these percentages as accurate descriptors assumes that none of the unreached students had transferred--an extremely improbable event. The proportion who reported they had transferred varied among the prototypes from 32.1 percent for the Full-Time Transfers to 7.5 percent of the Undisciplined Transfers.

In discussing the success of the community college in helping students whose goal is to transfer, one must consider the proportion who continue to attend the community college working toward their goal. During the final term of the project, Spring 1981, 29.6 percent of the Transfer SLudents were enrolled; 31.9 percent of the Full-Time, and 37.4 percent of the Technical. It is a warranted assumption that a large proportion of those who were enrolled in Spring 1981, would have met their goal of transferring to a senior college some time after the final interview.

For the final interview, the Transfer Students were divided into three categories:

1. those who were still attending the community college
2. those attending a baccalaureate-granting college, and
3. those not in attendance at any school.

Different questions were asked of students in the three groups.

Those still in attendance were asked how many more semesters they planned to attend before transferring, and to what college they planned to transfer. The distributions of the responses to these questions appear in Tables 4-25 and 4-26. For the total group, 19.6 percent were unsure how many additional semesters they planned to attend before transferring. Only 13.6 percent of the Full-Time but 25.4 percent of the Undisciplined Students selected this response. For the total group, 54.1 percent said they would transfer in one or two semesters, while this was true for 66.9 percent of the Full-Time Students.

Table 4-25. Transfer Sample, Attending Community College 1980-81:

Planned Number of Semesters Before Transferring

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Unsure	13.6	21.9	21.6	25.4	19.6
0	11.2	8.7	2.5	4.8	7.4
1	41.3	29.5	27.2	16.7	30.7
2	25.6	18.6	22.8	27.0	23.4
3	5.0	10.9	9.9	11.9	8.8
4	1.2	2.7	11.1	4.8	4.5
5	0.4	1.1	0.6	0.8	0.7
6 or more	1.7	6.5	4.3	8.7	4.8
N =	242	183	162	126	713
Percent of Sample	33.9	25.7	22.7	17.7	

Table 4-26. Transfer Sample, Attending Community College 1980-81:

College Planned to Attend

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Unsure	11.7	19.6	16.6	25.2	17.2
None	0.4	1.1	1.2	1.6	1.0
U. of C.	14.6	9.0	10.4	11.8	11.7
C.S.U.C.	66.0	61.9	61.3	51.2	61.3
Private Ca. Coll.	2.4	2.1	6.7	3.1	3.4
Out of Ca.	2.4	3.7	1.2	1.6	2.3
Professional Sch.	1.2	1.1	1.2	3.1	1.5
Other	1.2	1.6	1.2	2.4	1.5
N =	247	189	163	127	726
Percent of Sample	34.0	26.0	22.5	17.5	

For choice of senior institution, the majority, 61.3 percent, said they planned to attend one of the California State Universities or Colleges (CSUC) and 11.7 percent to a campus of the Universities of California (UC). There were 17.2 percent who were unsure, and just under 10 percent who planned to attend private, professional, or out-of-state schools.

Those students who had transferred and were interviewed during the 1980-81 academic year were asked three questions:

> "Is your major the same as at the community college?"
>
> "What is your grade point average at (the college attending)?"
>
> "Were there things that you were expected to know from your courses here that you didn't know?"

The distributions for these three questions appear in Tables 4-27, 4-28, and 4-29. Table 4-27 shows that about 70 percent of those who had transferred have the same or related majors; slightly more for the Full-Time Student and considerably fewer for the Part-Time and Undisciplined Transfer.

Table 4-27. Transfer Sample, Transferred: Baccalaureate and Community College Major, Same?

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Yes	58.3	65.0	45.8	37.0	55.6
Related	11.8	15.0	15.3	11.1	12.9
No	29.4	20.0	39.0	51.9	31.2
N =	187	60	59	27	333
Percent of Sample	56.2	18.0	17.7	8.1	

Table 4-28 shows the distribution of reported grade point averages at the senior college. The "unsure" category contains primarily those students who had not yet established a GPA at the colleges to which they had transferred. As men tend to overestimate their height and women to underestimate their weight, students generally overestimated their GPA when asked. However, even considering slight exaggeration, each of the distributions suggests that students who had transferred had done reasonably well.

Table 4-28. Transfer Sample, Transferred: Grade Point Average at Transfer Institution

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
0.6 to 1.0	0.6	0.0	0.0	0.0	0.3
1.6 to 2.0	3.4	5.6	3.6	3.8	3.8
2.1 to 2.5	8.9	14.8	1.8	7.7	8.6
2.6 to 3.0	21.2	25.9	17.9	38.5	22.9
3.1 to 3.5	23.5	14.8	25.0	7.7	21.0
3.6 to 4.0	4.5	9.3	17.9	7.7	7.9
Unsure	38.0	29.7	33.9	34.6	35.5
N =	179	54	56	26	315
Percent of Sample	56.8	17.1	17.8	8.3	

Table 4-29 gives the students' opinion of how well they were prepared to continue their studies at a senior college or university. This table is unusual in that there are only minor differences between the transfer prototypes. For the total, 68.4 percent indicated there was nothing that they were expected to know from their community college courses that they didn't know, and 23.5 percent said there were but few gaps in their lower-division work. Only 8.1 percent said there were a great many things that they didn't know that were expected of them.

Table 4-29. Transfer Sample, Transferred: Preparation for University Work

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Well Prepared	68.9	67.3	70.8	62.5	68.4
Moderately Well Prepared	23.3	23.6	20.8	29.2	23.5
Poorly Prepared	7.8	9.1	8.3	8.3	8.1
N =	180	55	48	24	307
Percent of Sample	58.6	17.9	15.6	7.8	

Those in the Transfer Function who were not attending any college were asked what kept them from transferring and those that planned to transfer in the future were asked where they had planned to go.

Table 4-30 gives the responses to the question about deterrents to transferring. A total of 55 percent said they would transfer in the future, with that answer being given by 77.1 percent of the Full-Time, 63.5 percent of the Technical, and 64.6 percent of the Part-Time Transfer Students. Only 36.8 percent of the Undisciplined Transfers thought they might transfer in the future. A large portion of this group said they preferred their job to transferring (30.8 percent) or had a goal change (21.1 percent). The Undisciplined Transfer represented more than 40 percent of the students in the Transfer Function who were not attending college during the final interviews.

Table 4-30. Transfer Sample, Non-attending: Stated Deterrents to Transferring

Reasons	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Goal Change	10.0	9.5	7.9	21.1	13.8
Finances	12.9	23.0	20.5	13.0	16.7
Preference for Job	8.6	13.5	19.7	30.8	21.5
Will Transfer in Future	77.1	63.5	64.6	36.8	55.0
Illness	1.4	2.7	1.6	1.1	1.5
Other	8.6	9.5	10.2	15.7	12.1
N =	70	74	127	185	456
Percent of Sample	15.4	16.2	27.9	40.6	

Those students not attending college, but claiming that they were planning to transfer in the future, were asked where they planned to transfer. Their responses are given in Table 4-31. More than half planned to attend CSUC and 7.9 percent, UC. Of this group, 14 percent said they would attend private, professional, or out-of-state colleges, or continue in another community college or trade school.

Table 4-31. Transfer Sample, Non-attending: Stated Planned Transfer Institution

	Full-Time	Technical	Part-Time	Undisciplined	Total
	%	%	%	%	%
Unsure	29.7	15.9	18.9	27.8	23.2
None	0.0	0.0	3.6	7.8	3.7
U. of C.	7.8	6.3	11.7	5.2	7.9
C.S.U.C.	50.0	58.7	56.8	41.7	51.0
Private Ca. Coll.	4.7	3.2	3.6	1.7	3.1
Out of Ca.	4.7	6.3	1.8	4.3	4.0
Professional School	0.0	0.0	0.9	1.7	0.8
Community College	3.1	6.3	1.8	1.7	2.8
Trade or Occup.	0.0	0.0	0.9	5.2	2.0
Other	0.0	3.2	0.0	2.6	1.4
N =	64	63	111	115	353
Percent of Sample	18.1	17.8	31.4	32.6	

It is difficult to summarize the effects of the community college experience on those who choose to transfer to senior colleges. If, when considering the proportion of community college students who transfer, one assumes that the Full-Time, Part-Time, and Technical Transfers represent the denominator of the fraction, well over half, perhaps as much as 0.70 will eventually attend a baccalaureate-granting institution. If one includes the Undisciplined Transfers, the proportion drops considerably. If one includes the entire entering cohort, regardless of their intent or goal, then the proportion that will eventually transfer may drop as low as 15 percent. Of those who transfer, only a small portion will do so in two years, and even after three years a significant portion will continue to study at the community colleges still expecting to transfer. More than 90 percent of those who do transfer consider themselves moderately or well prepared for the senior college. Most attend the CSUC; UC runs a poor second.

The detailed data presented above indicate that community colleges have performed the Transfer Function exceedingly well. CSUC and UC use different criteria to credit a community college as having helped prepare a student for their respective institution. Certainly, no credit is given the community college for the prototype, Expediter; those who are basically university students, but take one or more courses at the community college.

It is evident that community colleges are serving a wider variety of students with a greater assortment of goals and objectives than in decades past. However, the data reported in Chapter 4 indicate unequivocally that those who wish to transfer continue to be served in a reasonable and effective manner.

Chapter 5

The Vocational Function

This chapter describes those students whose goal was the acquisition of vocational skills to be used when they left the community college. There were 2,308 students in the Vocational Function, accounting for 35.5 percent of the total sample. Five vocational prototypes were identified, described in Chapter 1 and listed below.

Prototypes	Heading for Data Analysis
Program Completer	Program Completer
Job Seeker	Job Seeker
Job Up-Grader	Job Up-Grader
License Maintainer	
Career Changer	Career Changer

Because the License Maintainers represented less than 1 percent of the total sample and less than 2 percent of the Vocational Function, their data are included with those of the Job Up-Graders who have similar motives for college attendance. The proportion of the sample that each prototype represents varies in the tables presented in accordance with the data available.

The Technical Transfer prototype was included with the Transfer Function rather than the Vocational Function. This decision was not arbitrary; rather, it was made because the federal government defines vocational students as those who use the skills they learn to become productive wage earners immediately after leaving the training institution. If one included in the criteria the energy and effort used by the college faculty to teach vocational skills, the Technical Transfer would be considered a vocational student. Then, rather than 37 percent of the sample being Transfer and 35.5 percent Vocational, 43.2 percent would be in the Vocational Function and 29.2 percent in the Transfer Function. The implications of these proportions will be dealt with below.

VOCATIONAL STUDENTS: WHO THEY ARE AND WHY THEY CAME

Table 5-1 gives the distributions of the ages of the vocational prototypes when they entered the college, Fall 1978. As demonstrated previously, age is a critical variable; significant differences in age are related to differences in other student characteristics. The Program Completers and Job Seekers are, on the average, about 10 years younger than the Job Up-Graders and Career Changers. Of the former groups, more than half enter college under the age of 20, and of the latter groups, only about 15 percent. While only 5 percent or 6 percent of the Program Completers and Job Seekers started their courses over the age of 40, 25 percent to 30 percent of the Job Up-Graders and Career Changers were in that age range. From these dramatic differences in age, other discrepancies are predictable.

Table 5-1. Vocational Sample: Age

Age	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
15 thru 19	56.6	52.7	16.5	12.1	36.2
20 thru 24	21.0	20.7	19.0	13.5	19.5
25 thru 29	8.4	11.6	16.6	14.9	13.2
30 thru 34	5.9	5.3	14.2	16.3	9.7
35 thru 39	1.9	5.1	10.4	14.4	7.4
40 thru 44	3.5	1.9	7.9	12.1	5.3
45 thru 49	1.1	1.5	6.6	8.4	4.0
50 thru Oldest	1.6	1.2	8.7	7.5	4.7
N =	371	863	843	215	2292
Total	16.2	37.7	36.8	9.4	
Mean	22.45	22.88	31.28	33.39	26.89
Standard Deviation	7.68	7.59	11.28	11.11	10.47
Variance	58.96	57.60	127.13	123.48	109.70

Table 5-2 shows the sex ratio for the vocational prototypes. The overall sex ratio of 41.4 percent male/58.6 percent female is approximated for the Program Completers, but more women than expected (65 percent) were Job Seekers, and fewer than expected in both the Job Up-Graders (54.5 percent) and Career Changers (46.3 percent). The latter finding is expected since there are fewer women than men in the overall labor force. However, the large proportion of women in the least desirable vocational prototype, Job Seeker, may have implications for the concept of sex equity. These implications will be discussed later in this chapter.

Table 5-2. Vocational Sample: Sex

Sex	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Male	39.9	35.0	45.5	53.7	41.4
Female	60.1	65.0	54.5	46.3	58.6
N =	371	874	846	214	2305
Total	16.1	37.9	36.7	9.3	

Table 5-3 reports the distributions of ethnicity. The major discrepancies indicate that the Black students, who, overall, represent 9.5 percent of the vocational prototypes, represent only 6.5 percent of the Program Completers and 7.1 percent of the Job Up-Graders, but 12.8 percent of the Job Seekers. This finding, together with the previous discussion of sex ratio for Job Seekers, suggests a researchable hypothesis: the Job Seeker category is a combination of those who intended to learn skills quickly to get employment, and those who wanted to finish a program, but were either educationally or financially incapable of doing so. This latter type of Job Seeker might be the vocational equivalent of the Undisciplined Transfer Student.

Table 5-3. Vocational Sample: Ethnicity

Ethnicity	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
American Indian	0.0	1.1	1.6	0.5	1.0
Asian or Pacific	6.5	5.7	4.9	9.9	5.9
Black	6.5	12.8	7.1	9.9	9.5
Hispanic	16.2	13.9	9.5	12.4	12.5
White	68.8	64.7	75.4	67.3	69.5
Other	2.0	1.8	1.5	0.0	1.5
N =	352	842	800	202	2196
Percent of Sample	16.0	38.3	36.4	9.2	

Hispanics represented 12.5 percent of the vocational sample, 16.2 percent of the Program Completers, but only 9.5 percent of the Job Up-Graders. Caucasians, 69.5 percent of the vocational sample, were only 64.7 percent of the Job Seekers, but 75.4 percent of the Job Up-Graders. These data indicate that Caucasians who have jobs seek to improve their positions in a greater proportion than their numbers warrant and perhaps are taken with the "Horatio Alger" syndrome more than minority groups.

Tables 5-4 and 5-5 show distributions of responses to interview questions in Fall 1978, about the last school attended and the highest grade level achieved. These tables verify that the Program Completers and Job Seekers represent a group distinct from those students classified as Job Up-Graders and Career Changers. The former pair of prototypes have about 70 percent who last attended high school, and less than 25 percent who last attended community or a baccalaureate-granting college. For the Job Up-Grader, only 45 percent last attended high school, but 27 percent other community colleges, and 19 percent a four-year college. For the Career Changer, only 34 percent last attended high school, with 30 percent and 26 percent last attending other community and senior colleges.

Table 5-4. Vocational Sample: Last School Attended

Last School Attended	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
High School	72.6	68.2	45.1	33.9	57.4
Adult Night high School	2.0	2.8	3.0	4.2	2.9
Other Community Colleges	16.3	17.2	27.0	29.7	21.8
Four-Year College	7.3	7.6	19.0	25.5	13.3
ROP-ROC	0.6	0.1	0.1	1.0	0.3
Other	1.2	4.0	5.8	5.7	4.4
N =	343	815	778	192	2128
Percent of Sample	16.1	38.3	36.6	9.0	

For the highest grade level attained, the data are predictable: for the Program Completers and Job Seekers, three-fourths completed no more than high school, about 3 percent, an AA, and an additional 3 percent, a baccalaureate. For the Job Up-Grader and Career Changer, about 50 percent achieved no more than high school, but more than 6 percent had an AA degree, and 12 to 18 percent a bachelor's degree or higher.

Table 5-5. Vocational Sample: Educational Level Fall 1978

Educational Level	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Non High School Graduate	6.7	8.8	5.0	6.8	6.9
High School Graduate	69.8	65.1	48.3	40.5	57.5
Some College	17.0	20.1	28.5	28.4	23.5
AA Degree or Certificate	2.9	3.1	6.3	6.3	4.5
BA Degree	3.5	2.5	9.5	13.2	6.2
MA or Higher	0.0	0.5	2.3	4.7	1.5
N =	341	810	778	190	2119
Percent of Sample	16.1	38.2	36.7	9.0	

Tables 5-6 and 5-7 show the distribution of vocational prototypes on the variables Marital Status, and Number of Dependents. Predictably, from the age discrepancies of the Program Completers and Job Seekers, 72 percent and 76 percent, respectively, were never married, while among the Job Up-Graders and Career Changers, only 30 percent to 34 percent were never married. The data on number of dependents are likewise predictable, with the latter two prototypes having many more dependents than the former.

Table 5-6. Vocational Sample: Marital Status

Marital Status	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Never Married	72.9	65.6	34.3	30.1	52.0
Married	19.3	24.8	49.9	56.3	36.0
Separated	0.6	2.1	2.5	1.9	2.0
Divorced	2.2	5.3	8.8	7.8	6.3
Widowed	0.6	0.5	1.2	1.0	0.8
Changed Status	4.5	1.7	3.3	2.9	2.9
N =	358	848	814	206	2226
Percent of Sample	16.1	38.1	36.6	9.3	

Table 5-7. Vocational Sample: Number of Dependents

Dependents	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
0	82.5	76.7	53.3	50.5	66.7
1	8.1	9.6	15.0	13.2	11.7
2	4.2	6.6	15.3	14.2	10.1
3	2.3	4.2	8.6	14.2	6.5
More than three	2.5	2.8	7.8	7.4	5.0
N =	359	850	811	204	2224
Percent of Sample	16.1	38.2	36.5	9.2	

Tables 5-8 and 5-9 show the proportion of vocational students who are categorized as Financially and Educationally Disadvantaged. For the students who had jobs, that is, the Job Up-Graders and Career Changers, only 9.9 to 12.4 percent saw themselves as financially disadvantaged; while among the Program Completers and Job Seekers, more than 20 percent were financially disadvantaged. The proportions of educationally disadvantaged follow the same patterns, but the discrepancies are not as extreme.

Table 5-8. Vocational Sample: Financially Disadvantaged

	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Yes	22.4	21.3	9.9	12.4	16.5
No	77.6	78.7	90.1	87.6	83.5
N =	348	836	801	202	2187
Percent of Sample	15.9	38.2	36.6	9.2	

Table 5-9. Vocational Sample: Educationally Disadvantaged

	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Yes	17.1	16.7	12.6	13.4	15.0
No	82.9	83.3	87.4	86.6	85.0
N =	345	837	800	201	2183
Percent of Sample	15.8	38.3	36.6	9.2	

Table 5-10 shows the distribution of responses to a Fall 1978, interview question concerning the students' initial motives for attending classes. Because more than one reason was accepted, the columns sum to more than 100 percent. In Fall 1978, about 20 percent of the Vocational prototypes selected reasons for attending other than vocational training. Many of the Program Completers and Job Seekers saw themselves as Technical Transfers, and many Job Up-Graders and Career Changers as enrolling for personal enrichment in Fall 1978.

Table 5-10. Vocational Sample: Original Reason for Attendance[1]

Educational Goal	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Pre-employment Training	72.8	66.8	31.7	46.7	52.8
Preparation for Transfer	21.3	18.9	12.7	12.3	16.9
In-Service Training	4.1	6.9	46.0	13.4	19.5
Retraining	3.2	4.4	6.5	15.6	6.4
Self-Enrichment	9.5	19.5	24.9	27.1	21.0
N =	309	741	741	180	1971
Percent of Sample	15.7	37.6	37.6	9.1	

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[1] More than one reason was permitted: the columns sum to more than 100 percent.

The percentages reported present no surprises; the Program Completers and Job Seekers give predominately pre-employment training as their motives; the Job Up-Graders, in-service training; the Career Changers, a significantly larger proportion in the re-training category than the other groups.

Table 5-11 shows distributions that describe Vocational Students' occupational and educational position during the year previous to the beginning of the study. These data reaffirm the uniqueness of the prototypes; 34 percent of the Program Completers were full-time students, not employed, while less than 10 percent of the Job Up-Graders and Career Changers fell into that category. On the other hand, well over half of the Job Up-Graders and Career Changers were employed full-time, while this was true of only 17 percent of the Program Completers and 26 percent of the Job Seekers. The data indicate that the four prototypes do, indeed, come from different circumstances.

Table 5-12 gives the distributions of employment during the first semester of study at the participating colleges. About three-quarters of the Vocational sample were employed the first term of the project. The Program Completers and Job Seekers were employed predominately in unskilled and semi-skilled jobs and the Job Up-Graders and Career Changers in skilled and supervisory jobs.

Table 5-11. Vocational Sample: Occupational Status Before College Enrollment

Occupational Status	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Part-Time Student Part-Time Job	6.1	5.1	4.3	2.7	4.8
Part-Time Student Full-Time Job	3.6	5.3	9.8	13.3	6.6
Full-Time Job Only	17.0	26.0	55.2	51.1	37.6
Part-Time Job Only	3.9	6.1	5.9	3.7	5.5
Homemaker, Not Employed	6.1	9.0	5.6	7.4	7.2
Full-Time Student, Not Employed	34.8	23.9	6.7	8.0	17.9
Full-Time Student Part-Time Employed	22.1	19.6	8.2	6.9	14.7
Unemployed, Not Student	6.4	6.9	4.3	6.9	5.9
N =	330	799	766	188	2083
Percent of Sample	15.8	38.4	36.8	9.0	

Table 5-12. Vocational Sample: Fall 1978 Occupational Level

Occupational Level	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Unskilled	17.5	18.5	5.7	5.9	12.5
Semi-skilled	26.9	30.3	31.4	30.3	30.2
Skilled	13.3	15.0	36.9	33.5	24.4
Professional or Supervisory	1.8	2.1	14.8	10.1	7.4
Homemaker, Not Employed	6.3	9.7	3.4	8.5	6.7
Student, Not Employed	30.5	19.9	5.3	6.4	15.0
Other	3.6	4.6	2.5	5.3	3.7
N =	331	806	770	188	2095
Percent of Sample	15.8	38.5	36.8	9.0	

In summary, about three-quarters of those considered vocational students fell into the prototypes of Job Seekers and Job Up-Graders. The Vocational Students were two distinct demographic groups; the Program Completers and Job Seekers were younger, had a larger proportion of women, far fewer marriages and dependents than the Job Up-Graders and Career Changers.

The same dichotomy existed between previous educational and occupational status, and employment while attending school. The Job Up-Graders and Career Changers came primarily from a work environment, and Program Completers and Job Seekers from an educational environment. The former pair were employed in higher-level positions than the latter.

ENROLLMENT PATTERNS AND ACADEMIC ACHIEVEMENTS

This section describes the students in the Vocational sample in terms of their enrollment patterns, courses, units, and grade point averages.

Table 5-13 gives the distribution of enrollment patterns. The intervals indicate continuous and intermittent enrollments, for example, the first interval gives the proportion of students who attended the first term only, while the second interval gives the proportion who were not enrolled the second term, but returned sometime thereafter.

For Program Completers, 56.9 percent attended the first four consecutive terms or more. For the remaining three prototypes, there were relatively small differences in these intervals, with about 15 to 25 percent attending for four consecutive terms or more. Of these three, Career Changers seemed the most persistent, with 23.4 percent in that category. Both the Job Seekers and Job Up-Graders had about 40 percent attending only the first semester.

Table 5-14 shows the distributions of the persistence in another way; it gives the total number of semesters attended by each of the prototypes, allowing summer session to account for one half, or 0.5 of a semester. The intervals below the table summarize the attendance data. Of the Program Completers, 63.3 percent attended four or more semesters and 42.8 percent, five or more semesters. Of the remaining three prototypes, 20 to 30 percent attended four or more semesters. and 11 to 18 percent, five or more semesters. The modal number of semesters enrolled is 6.0 for the Program

Table 5-13. Vocational Sample: Enrollment Patterns

Enrollment Pattern	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
First Term Only	5.7	40.2	39.7	28.8	33.4
First Term Plus Return	6.3	9.8	12.1	9.9	10.6
First and Second Term Only	10.8	19.7	16.7	20.9	17.3
First and Second Term Plus Return	4.5	4.6	5.3	4.4	4.7
First, Second, and Third Term Only	14.0	8.3	7.3	9.3	9.0
First, Second, and Third Term Plus Return	1.6	2.1	2.8	3.7	2.4
First 4 Consecutive Terms	18.1	6.3	5.7	8.4	8.1
First 4 Terms Plus Return	3.5	0.8	1.1	0.5	1.3
Five Consecutive Terms	10.2	3.9	4.0	4.7	5.0
Six Consecutive Terms	25.1	4.3	5.3	9.8	8.5
N =	371	876	846	215	2308
Percent of Sample	16.1	38.0	36.7	9.3	
First Term Only	5.7	40.2	39.7	28.8	33.4
Continuous Enrollment[1]	78.2	42.6	39.0	53.0	48.0
Intermittent Enrollment	16.1	17.2	21.3	18.2	18.6

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[1] See footnote 1, page 3-16.

Table 5-14. Vocational Sample: Semesters[1] of Attendance

Semesters Attended	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
1.0	5.7	39.6	39.6	28.4	33.1
1.5	0.0	0.6	0.1	0.5	0.3
2.0	12.1	24.2	22.3	22.8	21.4
2.5	1.3	0.8	1.4	2.3	1.3
3.0	12.4	12.3	12.3	14.0	12.5
3.5	5.1	1.7	0.9	1.4	1.9
4.0	15.1	7.6	7.8	9.3	9.1
4.5	5.4	2.1	2.2	2.8	2.7
5.0	11.1	5.5	6.6	7.0	6.9
5.5	5.1	1.0	1.1	1.4	1.7
6.0	15.6	3.3	4.3	5.1	5.8
6.5	7.8	0.7	0.9	4.2	2.3
7.0	3.2	0.6	0.4	0.9	1.0
N =	371	876	846	215	2308
Percent of Sample	16.1	38.0	36.7	9.3	
Mean	4.24	2.35	2.43	2.84	2.73
Standard Deviation	1.66	1.52	1.58	1.74	1.72
Percent Attending 4 or more Terms	63.3	20.8	23.3	30.7	29.5
Percent Attending 5 or more Terms	42.8	11.1	13.3	18.6	17.7

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[1] See footnote 1, page 3-18.

Completers and 1.0 for each of the other prototypes. Again, the Career Changer was more persistent in attendance than either the Job Seeker or Job Up-Grader.

Table 5-15 shows the time of day during which Vocational Students attended classes. From the previous data presented, one could guess the results; the Program Completers were primarily day students, while the Job Up-Graders and Career Changers were primarily evening students. The Job Seekers were evenly split.

Table 5-15. Vocational Sample: Class Hours

Class Hours	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Day	67.0	51.1	23.5	29.9	41.5
Evening	12.0	33.4	66.7	63.5	45.0
Both Day and Evening	21.0	15.5	9.8	6.6	13.5
N =	367	865	839	211	2282
Percent of Sample	16.1	37.9	36.8	9.2	

Table 5-16 shows the distribution of SAM majors[1] assigned in Fall 1978 using CID codes. Overall, 18.4 percent of the Vocational Students were assigned the code for General Transfer or Personal Interest, rather than a vocational major. For all of the vocational prototypes, Business and Management was most often assigned, Engineering and related fields second most popular, and Health

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[1] See footnote 1, page 3-20.

Table 5-16. Vocational Sample: SAM Major 1978

SAM Major Fall 1978	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Agricultural and Natural Resources	1.6	2.3	1.9	1.6	2.0
Architectural and Environmental Design	2.2	0.8	0.7	1.1	1.0
Business and Management	22.2	36.9	35.0	31.1	33.1
Computer and Information Science	2.8	3.7	5.1	8.2	4.5
Education	0.9	1.8	1.8	1.1	1.6
Engineering and Related Fields	15.3	15.5	17.8	14.8	16.3
Fine and Applied Arts	1.6	4.0	1.0	1.6	2.2
Health Occupations	15.3	5.4	7.3	7.1	8.0
Home Economics	0.9	1.1	3.4	0.5	1.9
Public Affairs and Services	6.6	5.1	4.0	3.3	4.7
Commercial Services	7.8	2.6	1.9	0.5	3.0
Apprenticeship	4.1	3.2	2.6	2.7	3.1
General Transfer	13.8	11.1	10.7	18.0	12.1
Personal Interest	5.0	6.5	6.6	7.1	6.3
N =	320	650	729	183	1882
Percent of Sample	17.0	34.5	38.7	9.7	

Occupations, the third. These three general areas accounted for 57.4 percent of the total vocational majors.

Table 5-17 gives the distributions of the highest SAM Class[1] assigned during the course of the study. The Program Completers had 81.9 percent assigned Class One, or Specific Occupational Major; while the remaining three prototypes had about half in this interval, 47.7 to 52.7 percent. Note that 11.7 percent of the total vocational sample were always assigned to a SAM Class Four, Non-Occupational Major. Many of these anomalous classifications may be students who enrolled in vocational classes, but failed to complete them.

Table 5-17. Vocational Sample: Highest SAM Class

Highest SAM Class	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Specific Occupational Major	81.9	47.7	52.2	52.7	55.4
Broad Occupational Area	9.5	22.4	22.1	21.0	20.1
Occupational Area Not Determined	3.7	14.2	13.5	13.9	12.6
Non Occupational Major	4.9	14.7	12.0	12.2	11.7
N =	371	876	844	214	2305
Percent of Sample	16.1	38.0	36.6	9.3	

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[1] See footnote 2, page 3-20.

Tables 5-18 and 5-19 show the distributions of the total number of courses passed and the number of courses passed per term. In both tables the distribution for the Program Completer is relatively symmetrical and platykurtic. For the remaining three prototypes, the distributions are leptokurtic and have extreme positive skews. More than 40 percent of the Program Completers finished more than 15 courses; for the remaining three prototypes, 3 to 5 percent fell into that category. More than 55 percent of the Program Completers averaged three or more courses per term. For the other vocational students, this proportion varied from 11 to 25 percent.

Table 5-18. Vocational Sample: Number of Courses Passed

Number of Courses Passed	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Zero	2.4	28.9	21.2	17.7	20.8
1 - 5	15.9	43.3	57.3	47.9	44.5
6 - 10	27.0	15.4	13.6	23.3	17.3
11 - 15	14.0	6.4	5.0	6.5	7.1
16 - 20	17.0	3.7	2.0	2.3	5.1
21 - 25	12.9	1.7	0.7	1.4	3.1
26 - 30	8.1	0.6	0.2	0.9	1.7
31 and over	2.7	0.1	0.0	0.0	0.5
N =	371	876	846	215	2308
Percent of Sample	16.1	38.0	36.7	9.3	
Mean	13.53	4.28	3.50	4.66	5.52
Standard Deviation	8.55	5.62	4.47	5.19	6.78

Table 5-19. Vocational Sample: Number of Courses Passed Per Term

Courses Passed Per Term	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Zero	3.3	31.3	23.4	20.0	22.9
1	10.9	28.7	48.3	38.6	34.0
2	24.5	15.2	16.0	24.7	17.8
3	22.8	12.7	6.9	12.1	12.1
4	17.9	7.2	3.0	2.3	6.9
5	13.0	2.6	1.3	0.9	3.6
6	4.9	1.7	0.8	1.4	1.9
7 and over	2.7	0.7	0.3	0.0	0.8
N =	368	876	846	215	2305
Total	16.0	38.0	36.7	9.3	
Mean	3.19	1.82	1.44	1.64	2.02
Median	3.00	1.15	1.05	1.28	1.30
Mode	2.0	1.0	1.0	1.0	1.0

Tables 5-20 and 5-21 show the total units passed and the number of units passed per term for the Vocational Students. These data verify those from the previous tables; the Program Completers were, by far, the most productive of all the prototypes. The remaining three prototypes cluster; Career Changers appear to be a poor second.

Table 5-20. Vocational Sample: Total of Units Passed

Number of Units Passed	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Zero	2.4	28.9	21.3	17.2	20.8
1 - 10	9.1	34.4	48.2	39.5	35.9
11 - 20	10.7	16.4	14.5	17.2	14.9
21 - 30	15.1	8.2	8.3	14.0	9.9
31 - 40	12.4	3.8	2.9	4.7	4.9
41 - 50	18.0	4.6	2.8	2.8	6.0
51 - 60	13.5	1.8	1.1	1.4	3.4
61 - 70	10.5	1.3	0.9	2.8	2.8
71 - 80	5.4	0.5	0.0	0.5	1.1
81 and over	2.7	0.0	0.0	0.0	0.4
N =	371	876	846	215	2308
Percent of Sample	16.1	38.0	36.7	9.3	
Mean	39.17	11.80	9.90	13.96	15.71
Standard Deviation	22.06	15.24	12.94	15.62	18.90

Table 5-21. Vocational Sample: Number of Units Passed Per Term

Units Passed Per Term	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Zero - 1.5	4.3	36.2	28.3	20.0	26.7
1.6 - 3.5	8.1	18.6	38.3	29.8	25.2
3.6 - 5.5	8.7	13.1	13.5	19.5	13.1
5.6 - 7.5	11.1	11.2	7.9	15.8	10.4
7.6 - 9.5	16.5	8.7	5.4	5.6	8.5
9.6 - 11.5	18.4	4.9	2.5	5.6	6.2
11.6 - 13.5	16.0	3.0	2.1	1.9	4.6
13.6 - 15.5	11.1	2.4	1.5	1.4	3.4
15.6 - 17.5	3.3	1.3	0.2	0.0	1.1
17.6 - 19.5	0.5	0.5	0.0	0.5	0.3
19.6 and over	1.8	0.2	0.2	0.0	0.5
N =	369	876	846	215	2306
Total	16.0	38.0	36.7	9.3	
Mean	9.24	5.02	4.08	4.92	5.76
Median	9.66	2.98	2.63	3.52	
Mode	10.5	0.75	2.5	2.5	0.75

Table 5-22 lists the percent of units passed by each of the vocational prototypes in the last column. They are derived by dividing the average number of units passed by the average number of units attempted. Results corroborate data in previous tables. Program Completers passed 87 percent of the units that they attempted, while Job Seekers passed only 64 percent. Again, Career Changers and Job Up-Graders came in second and third, with 82 percent and 76 percent, respectively.

Overall, 26 percent of the units attempted by Vocational Students were not passed, most of these coming from the Job Seeker prototype. Implications of these findings are discussed at the end of this chapter.

Table 5-22. Vocational Sample: Percent of Units Passed

Vocational Sample Prototypes	Average Units Attempted	N	Average Units Passed	N	Percent of Units Passed
					%
Program Completer	44.85	364	39.17	371	87
Job Seeker	17.40	629	11.08	876	64
Job Up-Grader	13.00	666	9.90	846	76
Career Changer	17.08	183	13.96	215	82
Total	21.20	1842	15.71	2308	74

Table 5-23 gives the distributions of Grade Point Averages. The distributions indicate no extreme differences in the four prototypes. Job Up-Graders have the highest proportion of students in the intervals above 2.5. However, this discrepancy is partially explained from previous data that showed more than 80 percent of the Job Up-Graders averaged two or fewer courses per term; only 38.7 percent of the Program Completers fell into that category. The overall Grade Point Average and the distribution for the Job

Seekers is slightly, but significantly, lower than that of the other prototypes.

Table 5-23. Vocational Sample: Grade Point Average

Grade Point Average	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Zero	0.6	2.6	0.9	1.7	1.5
0.1 - 0.5	0.6	1.1	0.6	0.0	0.7
0.6 - 0.10	1.1	3.9	3.5	1.7	3.0
1.1 - 1.5	2.2	5.0	2.4	5.0	3.5
1.6 - 2.0	8.9	18.0	13.8	15.6	14.4
2.1 - 2.5	22.2	18.2	10.4	11.7	15.5
2.6 - 3.0	27.4	26.4	28.9	25.1	27.4
3.1 - 3.5	24.4	14.6	15.3	19.0	17.2
3.6 - 4.0	12.7	10.2	24.2	20.1	16.7
N =	361	617	654	179	1811
Percent of Sample	19.9	34.1	36.1	9.9	

In summary, Vocational Students attend an average of 2.73 semesters with 48 percent having continuous enrollments, 18.6 percent intermittent enrollments, and 33.4 percent enrollment for one term only. The Program Completers attended an average of 4.24 semesters, with 63.3 percent attending for four or more semesters and 42.8 percent for five or more semesters. Program Completers and Job Seekers are primarily day students, while Job Up-Graders and Career

Changers are evening students. Though 11.7 percent were never considered occupational majors by SAM criteria, for all four prototypes, Business and Management was the most popular major, with Engineering and related fields second. The total Vocational sample passed an average 5.52 courses and 15.71 units, but the Program Completers passed an average of 13.53 courses and 39.17 units. The Grade Point Averages were highest for the Job Up-Grader and lowest for the Job Seeker. The modal GPA for all four prototypes was 2.8.

THE EFFECTS OF THE COMMUNITY COLLEGE EXPERIENCE

This section attempts to answer the question, "Did the vocational training received at the community college make a difference in the students' career experiences?" To answer, data are presented on how closely studies were related to the jobs held, and how helpful the studies were in getting better jobs, raises, and promotions. Changes are examined in salary and job skill level, and data are reported on the students' evaluation of both their training and the college.

During many of the interviews, students were often asked how closely their jobs related to their studies. Table 5-24 shows student responses the first time the question was asked, Fall 1979, and during the final data collection period, 1980-81. At both times, fewer of the Job Up-Graders used the interval, "Not at all," than any of the other prototypes; more used the interval, "A great deal," than any but the Program Completers. Using the 1980-81 data, about 80 percent of Vocational Students took courses that were to some extent related to the jobs they held. For both periods, Career Changers saw less relationship between jobs and studies than the other prototypes. This is to be expected, as Career Changers attend college to learn skills for another and different job.

Table 5-24. Vocational Sample: Relationship of Job to Studies

Fall 1979

Relationship	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Not at all	23.1	35.3	13.3	35.7	24.4
Slightly	6.4	9.8	8.0	8.9	8.3
Somewhat	16.7	14.8	26.3	17.0	19.9
A great deal	53.8	40.1	52.4	38.4	47.4
N =	251	419	502	112	1284
Percent of Sample	19.5	32.6	39.1	8.7	

1980-81

Usefulness	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Not at all	23.3	28.9	10.3	44.4	20.9
Somewhat	23.3	36.4	36.1	29.4	33.3
A great deal	53.4	34.6	53.6	26.2	45.8
N =	189	280	532	126	1127
Percent of Sample	16.8	24.8	47.2	11.2	

Table 5-25 shows a composite of Vocational Students' response to how closely their jobs were related to their studies. For this table, the highest response was recorded for each student over many interviews. It shows that 57.3 percent saw their jobs and their studies as having a great deal of relationship during at least one interval, and only 16.5 percent continuously saw no relationship at all. It is not surprising that the Job Up-Graders saw the greatest relationship to their studies and work and the Program Completers the next greatest relationship. Job Seekers saw a relatively small relationship; 26.5 percent no relationship at all.

Table 5-25. Vocational Sample: Composite of Job Relationship to Studies

	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Not at all	13.2	26.5	6.2	31.2	16.5
Slightly	2.6	5.1	2.7	2.3	3.4
Somewhat	20.0	22.2	24.2	23.7	22.8
A great deal	64.2	46.1	66.9	42.8	57.3
N =	310	544	677	173	1704
Percent of Sample	18.2	31.9	39.7	10.2	

The Vocational Students were also frequently asked whether the jobs they held were better than those reported by them in the previous interview. Table 5-26 shows the responses to the "job change" question for Fall 1979, Spring 1980, and 1980-81. In each case, though the modal response is "Same," during the course of the study many of the Vocational Students acquired better jobs. For the three time periods, 45.2, 29.9, and 28.1 percent of the Vocational Students reported that jobs held were of a higher skill level.

Table 5-27 shows the occupational status in terms of skill level for the first data collection period, Fall 1978, and the final period, 1980-81. The unskilled jobs were cut by almost one third (12.5 percent to 4.5 percent), and the proportion of semi-skilled jobs remained about the same. However, the skilled jobs increased from 24.4 percent to 38.5 percent, and the professional and supervisory jobs from 7.4 percent to 9.8 percent. The Job Up-Grader increased skilled and the supervisory jobs from 51.7 percent to 69.1 percent; the Career Changer, from 43.6 percent to 57.4 percent; the Program Completer more than doubled the proportion of skilled and supervisory jobs from 15.1 percent to 34 percent; the Job Seekers made a modest gain in these categories.

To determine whether a job is better, one must examine the salaries along with the change in skill level and status of job. Tables 5-28 and 5-29 permit an examination of salary changes for Vocational Students.

In Chapter 3, it was reported that the Vocational Students made a higher gain in salaries than students in the other functions. However, there were significant differences in salaries and changes in salaries between the vocational prototypes.

Table 5-26. Vocational Sample: Job Change

Fall 1979

Job Change	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Worse	3.4	2.4	0.7	1.9	1.7
The same	55.2	46.2	54.7	61.9	53.1
Better	41.4	51.4	44.7	36.2	45.2
N =	145	290	459	105	999
Percent of Sample	14.5	29.0	45.9	10.5	

Spring 1980

Job Change	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Worse	3.7	2.1	2.3	1.5	2.4
The same	67.9	66.0	64.9	81.8	67.6
Better	28.4	31.9	32.8	16.7	29.9
N =	109	141	265	66	581
Percent of Sample	18.8	24.3	45.6	11.4	

1980-81

Job Change	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Worse	4.3	4.5	3.7	9.9	4.8
The same	57.9	59.6	72.3	75.2	67.1
Better	37.9	35.9	24.0	14.9	28.1
N =	140	198	375	101	814
Percent of Sample	17.2	24.3	46.1	12.4	

Table 5-28 reports a distribution of the salaries for the first data collection period, Fall 1978, and final period, 1980-81. Table 5-29 reports the means and standard deviations for the same period with the mean differences. It is evident from both the distributions and the means that the Program Completers are the poorest paid, followed closely by the Job Seekers. The Job Up-Graders and Career Changers have significantly higher salaries, and greater increases in salary than do the younger Vocational Students.

The last several tables indicate that the jobs held by the vocational sample have, indeed, improved since Fall 1978. There is an implication--indeed, an assumption--that studies at the community college were largely responsible for the improvement in employment. There is evidence that this assumption is warranted, albeit based solely on student report. Several times during the course of the project, students were asked how much their community college studies helped in advancing them occupationally or professionally.

In Fall 1979, the Vocational Students were asked, "How do you think that they [studies] helped you?" The responses, in Table 5-30, show that 11.3 percent indicated studies were not related in any way. The modal response for all four prototypes indicated that their studies taught the skills that constituted a major part of the job. Of the Program Completers, 28 percent said that they were completely trained by the community college, while only 3.8 percent of the Job Up-Graders used that response.

Table 5-27. Vocational Sample: Change in Occupational Status

Fall 1978

Occupational Level	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Unskilled	17.5	18.5	5.7	5.9	12.5
Semiskilled	26.9	30.3	31.4	30.3	30.2
Skilled	13.3	15.0	36.9	33.5	24.4
Professional or Supervisory	1.8	2.1	14.8	10.1	7.4
Homemaker, not Employed	6.3	9.7	3.4	8.5	6.7
Student, not Employed	30.5	19.9	5.3	6.4	15.0
Not Student, Unemployed	0.0	0.0	0.0	0.0	0.0
Other	3.6	4.6	2.5	5.3	3.7
N =	331	806	770	188	2095
Percent of Sample	15.8	38.5	36.8	9.0	

1980-81

Occupational Level	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Unskilled	3.2	8.4	2.1	5.2	4.5
Semiskilled	34.3	36.8	21.5	24.5	28.8
Skilled	28.6	23.6	52.6	43.2	38.5
Professional or Supervisory	5.4	1.9	16.5	14.2	9.8
Homemaker, not Employed	3.9	9.5	2.7	5.2	5.2
Student, not Employed	17.5	6.9	0.9	3.9	6.2
Not Student, Unemployed	6.4	12.2	2.2	0.6	5.8
Other	0.7	0.5	1.4	3.2	1.2
N =	280	419	582	155	1436
Percent of Sample	19.5	29.2	40.5	10.8	

Table 5-28. Vocational Sample: Hourly Salary

Fall 1978

Hourly Salary	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
1.00 - 2.99	32.7	20.3	7.8	10.7	16.0
3.00 - 4.99	51.5	54.7	35.8	36.9	44.9
5.00 - 6.99	9.9	13.9	22.5	18.9	17.3
7.00 - 8.99	3.5	5.5	19.0	13.9	11.5
9.00 - 10.99	1.2	4.0	7.4	13.1	5.9
11.00 to Highest	1.2	1.6	7.5	6.5	4.4
N =	171	543	511	122	1257
Percent of Sample	13.6	36.0	40.7	9.7	
Mean	3.80	4.37	6.12	5.95	5.15
Standard Deviation	1.66	2.14	3.30	3.05	2.88

1980-81

Hourly Salary	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
1.00 - 2.99	0.0	0.4	0.7	0.0	0.4
3.00 - 4.99	38.3	40.3	14.5	18.3	26.0
5.00 - 6.99	36.7	37.6	28.0	32.2	32.5
7.00 - 8.99	14.4	11.2	16.4	19.1	15.0
9.00 - 10.99	9.4	5.8	16.6	12.2	12.0
11.00 - 14.99	0.6	3.1	16.8	11.3	9.7
15.00 to Highest	0.6	1.6	7.0	6.9	4.4
N =	180	258	440	115	993
Percent of Sample	18.1	26.0	44.3	11.6	
Mean	5.73	5.77	8.56	7.86	7.54
Standard Deviation	2.07	2.45	4.19	3.86	3.69

Table 5-29. Vocational Sample: Hourly Salary

Fall 1978

Vocational Prototypes	Mean	Standard Deviation	N
Program Completer	3.80	1.66	171
Job Seeker	4.37	2.14	453
Job Up-Grader	6.12	3.30	511
Career Changer	5.95	3.05	122
Total	5.15	2.88	1257

Fall 1980-81

Vocational Prototypes	Mean	Standard Deviation	N
Program Completer	5.73	2.07	180
Job Seeker	5.77	2.45	258
Job Up-Grader	8.56	4.19	440
Career Changer	7.86	3.86	114
Total	7.24	3.69	992

Mean Difference

Program Completer	1.93
Job Seeker	1.40
Job Up-Grader	2.44
Career Changer	1.91
Total	2.09

Table 5-30. Vocational Sample: Do Courses Help On the Job?

Fall 1979

Amount of Help	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Skills Part of Job	21.5	26.0	31.8	22.5	27.4
Major Part of Job	36.0	28.6	45.5	35.2	38.0
Completely Train	28.0	13.4	3.8	9.9	11.8
Helpful on Job	5.9	11.5	13.9	11.3	11.4
Not Related to Job	8.6	20.4	5.0	21.1	11.3
N =	186	269	418	71	944
Percent of Sample	19.7	28.5	44.3	7.5	

In Spring 1980, Vocational Students were asked how their studies helped with their careers. Table 5-31 gives the responses to questions concerning how much their studies helped:

A. to get a job

B. on the job

C. to get a raise

D. to get a promotion

For Vocational Students, 42.3 percent were helped to some degree in getting a job. Just under 80 percent said their courses were of help on the job, 38 percent felt their studies contributed to their getting a raise, and just under 30 percent felt the community college courses were responsible to some degree for their promotions.

Table 5-31. Vocational Sample: How Study Helped with Career

Spring 1980

A - HELP GET JOB	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Not at all	51.1	50.0	63.2	69.2	57.7
Somewhat	9.9	27.8	13.4	19.2	16.7
A Great Deal	38.9	22.2	23.6	11.5	25.6
N =	131	144	254	52	581
Percent of Sample	22.5	24.8	43.7	9.0	
B - HELP ON JOB					
Not at all	29.6	30.5	11.8	23.6	21.1
Somewhat	22.4	33.3	27.3	34.5	28.4
A Great Deal	48.0	36.2	60.9	41.8	50.5
N =	125	141	271	55	592
Percent of Sample	21.1	23.8	45.8	9.3	
C - HELP WITH RAISE					
Not at all	71.3	71.3	52.4	68.8	62.0
Somewhat	12.0	18.9	22.8	20.8	19.5
A Great Deal	16.7	9.8	24.8	10.4	18.4
N =	108	122	254	48	532
Percent of Sample	20.3	22.9	47.7	9.0	
D - HELP WITH PROMOTION					
Not at all	81.1	81.5	59.7	74.5	70.3
Somewhat	7.5	12.6	16.2	21.3	14.1
A Great Deal	11.3	5.9	24.1	4.3	15.6
N =	106	119	253	47	525
Percent of Sample	20.2	22.7	48.2	9.0	

The Job Up-Graders, who constituted the largest single prototype for the vocational sample during this data collection period, saw themselves as receiving more help on the job, getting a raise, and getting a promotion than any of the other prototypes. The Job Seekers saw their community college studies as being less helpful in these areas than their fellow Vocational Students.

During the final data collection period, the question was asked of Vocational Students, "We would like to know if your training here helped you advance. Did it? (And if so, how?)." The responses to this question appear in Table 5-32. There were 38.7 percent who said, "no advance," while 16.3 percent felt the training helped them in getting a job. For all other categories, the Job Up-Grader had a higher proportion than the other prototypes, for example, raise, promotion, and praise from employer.

Table 5-32. Vocational Sample: How Did Training Help You Advance?

Amount of Help	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
No Advance	29.1	40.7	38.9	51.4	38.7
Got a Job	30.5	27.1	7.6	12.5	16.3
Got a Raise	6.6	7.0	9.5	5.6	8.1
Got a Promotion	6.0	6.1	11.2	6.9	8.8
Raise and Promotion	7.9	6.5	12.8	4.2	9.9
Employer Praise	9.9	5.6	12.2	11.1	10.2
Other	9.9	7.0	7.8	8.3	8.0
N =	151	214	475	72	912
Percent of Sample	16.6	23.5	52.1	7.9	

During the course of the study, students were asked to assign a grade to their colleges on an A through F basis. The results appear in Table 5-33. Of the Vocational Students, 83.9 percent gave the college an A or a B. The Program Completers gave the colleges the highest Grade Point Average, and the Job Seekers, the lowest.

Table 5-33. Vocational Sample: Student Grade of College

Grade	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Excellent	35.2	28.4	33.4	38.8	32.6
Very Good	54.0	52.3	49.1	49.5	51.2
Satisfactory	10.0	14.1	10.0	7.8	11.1
Poor but Passing	0.8	1.0	0.4	1.9	0.8
Failing	0.0	0.3	0.4	0.0	0.3
Unsure	0.0	3.9	6.6	1.9	4.0
N =	250	384	452	103	1189
Percent of Sample	21.0	32.3	38.0	8.7	

During the final data collection period, the sample was asked to rate its training. Results appear in Table 5-34. Only 2 percent rated their training as, "not good," and more than three-quarters used, "very good," as a response. The Job Seeker gave his training the lowest rating of the four prototypes.

These data indicate that the vocational training given at the community colleges did, indeed, affect the occupational and professional status of the large majority of students. From their perspective, they see their studies as being related to their jobs, of some help in improving their jobs, and helpful in getting raises and promotions. Their evaluations of both the colleges and the individual programs is very high.

Table 5-34. Vocational Sample: Rating of Training

1980-81

Rating	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Not Good	0.0	3.6	2.0	1.3	2.0
Somewhat Good	22.9	24.6	21.8	17.7	22.3
Very Good	77.1	71.9	76.1	81.0	75.7
N =	157	224	490	79	950
Percent of Sample	16.5	23.6	51.6	8.3	

Table 5-35 reports Vocational Students' usage and evaluation of counseling. Though these data were collected in the final period of the project, only a small portion (466) or 38 percent of those contacted had used counseling services. Of these, 8.1 percent were unsatisfied with the services offered and 64 percent were completely satisfied. As would be expected, Program Completers and Career Changers made more use of the counseling services than Job Seekers or Job Up-Graders.

Table 5-35. Vocational Sample: Counseling--Usage and Evaluation

Number of Visits and Evaluation	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Once Unsatisfied	5.8	2.1	7.9	7.7	5.4
Once Part Satisfied	5.8	11.1	18.4	15.4	11.6
Once Completely Satisfied	14.1	20.8	27.2	21.2	20.2
Twice Unsatisfied	1.9	1.4	1.8	1.9	1.7
Twice Part Satisfied	6.4	4.9	7.9	7.7	6.4
Twice Completely Satisfied	17.3	23.6	16.7	13.5	18.7
Three or More Unsatisfied	0.6	2.1	2.6	0.0	1.5
Three or More Part Satisfied	12.2	12.5	2.6	7.7	9.4
Three or More Completely Satisfied	35.9	21.5	14.9	25.0	25.1
N =	156	144	114	52	466
Percent of Sample	33.5	30.9	24.5	11.2	

Table 5-36 is a conglomerate of data collected during the final interview concerning use and evaluation of student services other than Counseling. The first generalization is that, considering that well over a thousand Vocational Students were interviewed, the highest use of any of the student services was the 197 who used the Tutorial Center. Of these, the majority, 56.3 percent, used it more than three times and were completely satisfied, and only 5 percent were dissatisfied regardless of use. The next most frequently used service was Financial Aids, with 158 students. Of these, 12 percent were dissatisfied regardless of usage. Perhaps the most surprising finding is that only 76 of the students contacted used the Career Planning Center, while as reported elsewhere, more than 200 of the Transfer Students made use of that facility.

Table 5-36. Vocational Sample: Student Services by Use and Evaluation

Use and Evaluation	Tutorial Center	Financial Aids	Career Planning	Women's Center
	%	%	%	%
Once Unsatisfied	2.5	9.5	1.3	
Once Part Satisfied	4.1	10.8	30.3	11.1
Once Completely Satisfied	9.6	22.2	31.6	44.4
Twice Unsatisfied	1.0	0.6	1.3	5.6
Twice Part Satisfied	5.1	4.4		5.6
Twice Completely Satisfied	12.7	12.7	15.8	16.7
3 or More Unsatisfied	1.5	1.9	2.6	
3 or More Part Satisfied	7.1	7.6	2.6	5.6
3 or More Completely Satisfied	56.3	30.4	14.5	11.1
N =	197	158	76	18

Use of the Placement Center is not reported in Table 5-35 because intervals dealt with how much help was received by the student in getting a job. There were 105 of those contacted who used the Job Placement Center, of which 43 percent got jobs through the center, and an additional 10 percent were helped in getting a job. Most of the Vocational Students making use of each of the student services came from the Program Completer and Job Seeker prototypes.

Table 5-37 gives the distributions of Vocational Students in response to an interview question from the final interview asking whether the students planned to finish their programs. There are great differences among the prototypes, but none that are unexpected. Of the Program Completers, 81 percent reported that they already had completed or expected to complete their programs, while only 41.4 percent of the Job Seekers, 42.7 percent of the Job Up-Graders, and 49.2 percent of the Career Changers used those responses. Job Seekers and Job Up-Graders had the highest proportion of students who had definitely decided not to finish, 46.5 percent and 45.7 percent, respectively.

Table 5-37. Vocational Sample: Plans to Finish Program

	Program Completer	Job Seeker	Job Up-Grader	Career Changer	Total
	%	%	%	%	%
Yes	57.7	34.1	31.5	42.3	38.7
Not Sure	5.1	12.1	11.5	13.8	10.6
No	13.8	46.5	45.7	36.9	38.6
Already Have	23.3	7.3	11.2	6.9	12.1
N =	253	355	511	130	1249
Percent of Sample	20.3	28.4	40.9	10.4	

Table 5-38 gives the percentage of each of the vocational prototypes who were in attendance during the last term of the project, Spring 1981. Note that more than a third of the Program Completers and 18.1 percent of the Career Changers were still attending college, while just over 13 percent of the Job Seekers and Job Up-Graders fell into that category. Of further significance is that 25.1 percent of the Program Completers and 9.8 percent of the Career Changers were in attendance for six consecutive terms. This was true for only 4.3 percent and 5.3 percent of the Job Seekers and Job Up-Graders. From these data one can infer that a large proportion of the Program Completers and Career Changers will finish the programs in which they enrolled, possibly without obtaining a degree or certificate.

Table 5-38. Vocational Sample: Percent Attending Spring 1981

Vocational Sample Prototype	Number Attending	Number in Sample	Consecutive Attendance	Intermittent Attendance	Percent Attending
Program Completer	129	371	25.1	9.7	34.8%
Job Seeker	90	876	4.3	6.0	10.3%
Job Up-Grader	118	846	5.3	8.5	13.9%
Career Changer	39	215	9.8	8.3	18.1%
Total	376	2308	8.5	7.8	16.3%

To summarize the effect of the community college experience on the careers of the Vocational Students, the vast majority said that the courses they studied were related to their jobs. Fewer of the Career Changers than others reported this close relationship, but, by definition, students belonging to this prototype are learning skills for jobs other than those in which they were employed.

During the course of the SLS, most students in the Vocational sample continuously improved their jobs. There are three criteria to substantiate this generalization. The first comes from the responses to the often-asked question, "Is your job about the same as it was the last time we spoke?" For each interview, though the modal response indicated no change, between a quarter and a half of the students saw their jobs as better than they were previously. Second, the skill level of the jobs was increased. The proportion of unskilled jobs at the beginning of the project was 12.5 percent and at the end only 4.5 percent, a considerable reduction. The skilled jobs increased from 29.4 percent to 38.5 percent, the supervisory jobs from 7.4 percent to 9.8 percent, and the percent of Homemakers was reduced from 6.7 percent to 5.2 percent. A third criterion indicating improvement in jobs comes from salary data. Overall, the hourly wage increased from $5.15 to $7.24, an increase of $2.09 an hour. The greatest increase was made by the Job Up-Graders, $2.44 an hour; the smallest by the Job Seekers, $1.40 per hour.

Vocational Students were often asked in the interviews how their studies helped them improve. Data presented indicate that a very small proportion received no help, and a significant proportion learned all or part of the skills required for their jobs at the community college. For many, their studies helped getting a job, a raise, or a promotion.

When asked to evaluate their colleges, Vocational Students gave them a very high Grade Point Average; only 1 percent assigned a D or an F grade, while almost 85 percent assigned an A or a B. In evaluating their own training, only 2 percent said it was not good, while 75.7 percent said it was very good. Though student services were little used by the Vocational sample, evaluation of student services was positive. The vast majority of the Vocational Students liked the college, liked the training, and felt as if their careers were improved and enhanced.

Did the community college experience help the Vocational Students? The bulk of the evidence indicates an unqualified "YES." Though student opinion is sometimes unreliable, on what other source of data can one base an answer to the question?

Of the four prototypes, Job Up-Graders and Program Completers seemed to have gained the most and, likewise, been most satisfied with the program. Data from the Job Seekers leave a mildly uncomfortable feeling. They are one of the younger groups, and the vast majority have earned a high school diploma or less. They have more than their share of disadvantaged students, both educationally and financially. There are more women and minorities among the Job Seekers than are warranted by their numbers in the sample, and, though they seem to have improved themselves as a group, it was not to the same extent as the other Vocational prototypes.

Just as the community colleges are not successful with all students who intend to transfer to a baccalaureate-granting institution, so they are not successful with all students who come to learn job skills. The data indicate that the Job Seeker prototype, representing more than 37 percent of the total vocational sample, is itself a "mixed bag." Some, it would appear, do attend for one or two semesters, enrolling in one or two courses to learn entry-level job skills. They care little about completing programs or even the courses in which they are enrolled. They learn just enough to be successful in getting a job in the field. There are others in this category that are not fulfilled; many who may originally have expected to complete programs, but find themselves unable to do so because they lack the prerequisite skills or discipline. As a consequence, their jobs improved less, and their hourly wage increased less than other Vocational Students. The most damning of all evidence is that there is less of a relationship between their studies and their jobs than for other vocational prototypes. This is the opposite of expectations. As with the Job Up-Graders, there should be an extremely high relationship between jobs and studies for the Job Seeker prototype. Further, they found their courses less helpful with finding jobs, getting raises, or obtaining promotions than did their fellow Vocational Students. They rate both the college and the training lower, are less satisfied with counseling and other student services, and don't finish or plan to finish their courses or programs like other Vocational Students.

It is this prototype, the Job Seeker, on whom further research should concentrate. Though not all other Vocational Students are completely content with what has been offered them, some portion of Job Seekers represent the largest share of our failings in vocational education.

Data presented in this chapter have implications for many aspects of community college vocational education. The present author, having no expertise in such things as finance, legislation, and administration, leaves the bulk of the implications to readers more sophisticated in these areas. There are, however, certain evident conclusions that can be postulated on the basis of the data presented in this chapter.

First, in considering the vocational education function of community colleges, one should be concerned with more than the 35.5 percent of an entering cohort who were labeled Vocational Students for this study. The Technical Transfer, whose course of study is largely in the vocational area, and many of the Hobbyists, Course

Takers, Lateral Transfers, and Explorer/Experimenters enrolled in vocational courses. The data indicate that about 70 percent of all students in an entering cohort will enroll in vocational courses. The sharp distinction between vocational and non-vocational, which is made by federal and state regulations and was operationally defined by the SAM project and redefined by the SLS, remains blurred. Though it is difficult to tell who is a Vocational Student, it is even more difficult to tell who isn't. Perhaps those who govern community colleges should look for more meaningful and relevant categories to differentiate the mission and functions served by the colleges than are presently used.

Second, about three-quarters of the Vocational Students were assigned to the prototypes Job Seeker and Job Up-Grader. Neither of these categories is concerned with programs, but rather with individual courses. A minuscule proportion of the non-vocational students who enrolled in vocational courses care about vocational programs. Few community college students identify with the specific programs offered. There are outstanding exceptions to this generalization, for example, the registered nurse program.

One communality of the few programs with which the students do identify is that each seems to have a relatively low selection ratio, that is, not everyone who applies is accepted. Community college students seem to value exclusivity. Even programs that are selective, but lead to relatively low-paying jobs with little room for advancement, for example, Animal Health Technology and Emergency Medical Technician, are sought after by Vocational Students, have little attrition, and have excellent placement records.

These findings should have meaning for the administration of instruction at our colleges, particularly in the scheduling and offerings of courses that are used by our Vocational Students in the Job Seeker and Job Up-Grader prototypes.

Third, the data dealing with sex ratios reflect society's treatment of women. Though there were a large majority of women students in the total sample and in the Vocational sample, they were under-represented in the more prestigious vocational prototypes (Program Completers, Job Up-Graders, and Technical Transfers) and over-represented in the marginal prototype, that is, Job Seeker. Much effort and money has been expended to achieve sex equity in vocational education; a great deal more is required. The data hint that progress is being made, but equity has not been achieved.

Last, a great deal has been written about the prototype Job Seeker, described briefly in Chapter 1 and in more detail in the Prototyping Manual. A significant proportion of this prototype represents the vocational education failures. Many vocational faculty administrators talk about "job-out" as opposed to the dropout: they infer that the students who disappear in mid-semester or before completing a program do so because they have learned enough to get the job they sought. Data from SLS indicated that the "job-out" concept is but partially true. Many of the Job Seekers are employed in jobs related to their studies and have considerably improved their careers. However, a significant proportion have shown little or no improvement in occupational status, were not employed in the fields in which they took courses, and were reasonably harsh in their evaluations of both the college and their training.

It is about this group that more information should be sought. Further, vocational education research should concentrate on identifying Job Seekers as early as possible and assisting them to set realistic goals and achieve them.

Chapter 6

The Special Interest Function

This chapter describes students who attended community college for their own special interests, for reasons that had little to do with transferring to a baccalaureate-granting institution or learning vocational skills. This portion of the sample is called the Special Interest Students, though the variety of interests declared by them has an awesome magnitude. Six prototypes were described in Chapter 1 as defining this function.

Prototypes	Heading for Data Analysis
Hobbyist	Leisure Skills
Culture Seeker	
Education Seeker	
Lateral Transfer	Lateral Transfer
Basic Skills	Basic Skills
Explorer/Experimenter	Explorer/Experimenter

The first three are similar in age, background, and intellect; those who attended to learn hobby skills, to get cultural experiences, or to take academic courses, that is, learning for the sake of learning. Data from these three groups have been combined in this chapter and are reported under the heading, Leisure Skills Students. This group, comprising the three prototypes, has 1,275 persons, or, 72 percent of the Special Interest Function.

A fourth Special Interest prototype, the Lateral Transfer, was made up of those who took prerequisites at a community college to transfer to a vocational or professional school other than a baccalaureate-granting institution. This group represented 54 students, or, 3.1 percent of the Special Interest group.

A fifth Special Interest group attended to learn basic skills. This group had a large proportion of recent immigrants needing to learn English language skills. There were 187 students in this group, accounting for 10.6 percent of the Special Interest Function.

The sixth prototype, called the Explorer/Experimenter, consisted of those whose special interest was to determine an educational or vocational plan; to decide what to do with the remainder of their lives. This group consists of 254 students, or 14.4 percent, of the Special Interest Function.

It is evident that the Special Interest group comprises a great variety of people and interests. There is no single motive that binds them together as there is for the Transfer and Vocational Functions. However, they represent 1,782 persons or 27.5 percent of the total sample.

SPECIAL INTEREST STUDENTS: WHO THEY ARE AND WHY THEY CAME

Table 6-1 gives the distributions of age for the Special Interest Function. Note that this table, unlike those previously reporting age, contains several intervals beyond age 50. Those students in the Leisure Skills prototypes (72 percent of the group) are considerably older than any group previously examined. Almost 14

Table 6-1. Special Interest Sample: Age

Age	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
15 thru 19	20.2	61.1	38.0	44.1	26.7
20 thru 24	17.0	24.1	22.5	18.9	18.1
25 thru 29	15.8	7.4	15.5	10.2	14.7
30 thru 34	13.9	7.4	10.7	6.3	12.3
35 thru 39	7.8	0.0	4.3	9.1	7.3
40 thru 44	5.9	0.0	4.8	2.4	5.1
45 thru 49	6.0	0.0	2.7	3.1	5.0
50 thru 54	3.5	0.0	1.6	3.1	3.2
55 thru 59	3.4	0.0	0.0	1.2	2.6
60 thru 64	3.4	0.0	0.0	0.4	2.5
65 thru Oldest	3.3	0.0	0.0	1.2	2.5
N =	1275	54	187	254	1770
Percent of Sample	72.0	3.1	10.6	14.4	
Mean	32.27	20.81	25.07	26.05	30.27
Standard Deviation	13.90	4.22	8.44	10.89	13.24
Variance	193.29	17.81	71.29	118.55	175.24

percent of the Leisure Skills Students were over 50 when they first enrolled, and only 20.2 percent were under 20. The Lateral Transfer prototype had more than 60 percent under 20 when starting, and well over 90 percent under 30. This table is the first indicator of the dramatic diversity of persons in the Special Interest Function.

Table 6-2 shows the sex ratios for the prototypes. Overall, women have a higher representation in this function, 62.3 percent, than in the total sample, 56.6 percent. Note that women represent 71.6 percent of the Explorers, but only 54.3 percent of the Basic Skills Students. Though the proportion of Leisure Skills Students who are women (61.5 percent) is about the same as for the total function (62.3 percent), it is considerably higher than that of the total sample (56.6 percent). One could infer that women have more leisure time to fill and more time to learn leisure skills than do men.

Table 6-2. Special Interest Sample: Sex

Sex	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Male	38.5	35.2	45.7	28.4	37.7
Female	61.5	64.8	54.3	71.6	62.3
N =	1277	54	188	257	1776
Total	71.9	3.0	10.6	14.5	

Table 6-3 gives distributions of ethnicity within the Special Interest prototypes. Caucasians represent 71.5 percent of the function compared to 69.4 percent of the total sample. Caucasians represent only 27.5 percent of the Basic Skills Students, while 41 percent are Hispanic, 11.8 percent Black, and 13.5 percent Asian. This is evidence, albeit inferential, that a very large proportion of the Basic Skills prototype are concerned with English as a Second Language.

Table 6-3. Special Interest Sample: Ethnicity

Ethnicity	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
American Indian	1.5	0.0	0.0	1.2	1.2
Asian or Pacific	4.5	3.8	13.5	5.6	5.5
Black	4.9	5.7	11.8	7.2	5.9
Hispanic	10.7	18.9	41.0	11.2	14.2
White	77.3	69.8	27.5	74.1	71.5
Other	1.2	1.9	6.2	0.8	1.7
N =	1235	53	178	251	1717
Percent of Sample	71.9	3.1	10.4	14.6	

At the other end of the continuum, more than 77 percent of the Leisure Skills Students are Caucasians, while the ethnic minorities are underrepresented in this group. Likewise, the Caucasians dominate the Explorer/Experimenter prototype, comprising 74.1 percent.

Tables 6-4 and 6-5 show the distributions of the Special Interest Students' answers to Fall 1978, interview questions about the last school they attended and the highest grade level they attained. Data from these tables are predictable and follow from prototype descriptions and the previously reported demographic data. Almost half of the Leisure Skills Students last attended a community or senior college compared with 25.5 percent and 16.8 percent of the Laterial Transfers and Basic Skills Students and 34 percent of the

Explorer/Experimenters. In a similar vein, 5.7 percent of the Leisure Skills Students earned AA degrees and 16.7 percent baccalaureates or higher degrees. While in combination, about 4 percent of the Lateral Transfers and Basic Skills Students fell into each of these categories. The previous education of the Explorer/Experimenter falls between the Leisure Skills Students and the Basic Skills Students.

Table 6-4. Special Interest Sample: Last School Attended

Last School Attended	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
High School	43.6	72.3	66.9	58.6	48.9
Adult Night High School	3.0	0.0	6.0	3.4	3.3
Other Community College	22.8	17.0	10.8	17.2	20.6
Four-Year College	24.9	8.5	6.0	16.8	21.4
ROP-ROC	0.3	0.0	0.0	0.4	0.3
Other	5.4	2.1	10.2	3.4	5.5
N =	1193	47	166	232	1638
Percent of Sample	72.8	2.9	10.1	14.2	

Table 6-5. Special Interest Sample: Educational Level Fall 1978

Educational Level	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Non High School Graduate	9.3	6.5	28.7	6.0	10.7
High School Graduate	40.2	63.0	50.6	58.8	44.6
Some College	27.9	26.1	17.7	24.5	26.4
AA Degree or Certificate	5.7	2.2	1.2	2.1	4.7
BA Degree	13.0	2.2	1.8	6.9	10.7
MA or Higher	3.7	0.0	0.0	1.7	2.9
N =	1188	46	164	233	1631
Percent of Sample	72.8	2.8	10.1	14.3	

Tables 6-6 and 6-7 give the distribution of marital status and number of dependents for the Special Interest prototypes. These data hold no surprises; the Leisure Skills group, being older and better educated, had a larger percent who married, and they have more dependents.

Table 6-6. Special Interest Sample: Marital Status

Marital Status	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Never Married	36.1	78.8	54.8	57.9	42.4
Married	50.6	15.4	38.4	32.5	45.7
Separated	1.4	1.9	0.6	0.8	1.2
Divorced	5.7	1.9	2.8	6.3	5.4
Widowed	1.6	0.0	0.6	0.0	1.2
Changed Status	4.6	1.9	2.9	2.5	4.0
N =	1236	52	177	240	1705
Percent of Sample	72.5	3.0	10.4	14.1	

Table 6-7. Special Interest Sample: Number of Dependents

Dependents	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
0	61.9	84.6	62.1	75.7	64.6
1	13.9	5.8	12.4	12.1	13.2
2	11.8	3.8	12.4	7.5	11.0
3	6.8	3.8	6.2	3.3	6.2
More than three	5.5	1.9	6.7	1.3	4.9
N =	1234	52	177	239	1702
Percent of Sample	72.5	3.1	10.4	14.0	

Tables 6-8 and 6-9 show the proportion of each of the Special Interest prototypes reporting themselves to be financially or educationally disadvantaged.[1] While only 10.5 percent of the Leisure Skills Students saw themselves as financially disadvantaged, and 13 percent educationally disadvantaged, the comparable number for Basic Skills Students were 33 percent and 52 percent, respectively. Once again, there is evidence of the diversity included in the Special Interest Function.

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[1] See Page 3-10 for definition of "disadvantaged."

Table 6-8. Special Interest Sample: Financial Disadvantage

	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Yes	10.5	18.4	32.7	13.8	13.4
No	89.5	81.6	67.3	86.2	86.6
N =	1220	49	168	239	1676
Percent of Sample	72.8	2.9	10.0	14.3	

Table 6-9. Special Interest Sample: Educational Disadvantage

	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Yes	13.6	30.6	52.4	14.3	18.1
No	86.4	69.4	47.6	85.7	81.9
N =	1223	49	170	238	1680
Percent of Sample	72.8	2.9	10.1	14.2	

Table 6-10 shows the responses of the Special Interest sample to a Fall 1978, interview question about their reasons for attending college.[1] Three-quarters of the Leisure Skills Students use self-enrichment as one of their reasons, while most of the remaining 25 percent saw themselves as getting pre-employment training or transferring to a baccalaureate-granting institution. The predominate reasons for the Lateral Transfer were pre-employment training and preparation for transfer. The modal reason for both the Basic Skills Student and Explorer/Experimenter was self-enrichment. Once again, the diversity of this Special Interest Function is demonstrated.

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[1] Because more than one reason was permitted, the columns sum to more than 100 percent.

Table 6-10. Special Interest Sample: Original Reason for College Attendance[1]

Reason	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Pre-employment	17.6	50.0	33.4	29.3	21.4
Preparation for Transfer	12.2	54.5	23.9	25.8	16.2
In-service Training	7.6	8.2	9.6	6.0	7.5
Retraining	2.5	0.7	1.4	3.0	2.4
Self-enrichment	74.5	6.8	47.8	53.6	67.2
N =	1113	44	147	202	1506
Total	73.9	2.9	9.8	13.4	

Table 6-11 shows the distributions of Special Interest Students that describe their educational and vocational status before matriculating to one of the participating colleges. Only 18.6 percent of the largest group, Leisure Skills, were full-time students, while the remaining three prototypes had 40 percent to

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[1] Because more than one reason was permitted, the columns sum to more than 100 percent.

45 percent in this interval. However, the Leisure Skills Students had 15.5 percent who were homemakers, while the others varied from 4.4 percent to 9.8 percent. Each of the four groups is different, one from the other, on this variable.

Table 6-11. Special Interest Sample: Occupational Status Previous to College Enrollment

Occupational Status	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Part-Time Student Part-Time Job	3.9	8.9	0.6	5.1	3.9
Part-Time Student Full-Time Job	6.6	8.9	4.9	5.5	6.4
Full-Time Job Only	42.4	17.8	38.7	28.5	39.4
Part-Time Job Only	5.3	2.2	6.1	4.3	5.1
Homemaker, not Employed	15.5	4.4	7.4	9.8	13.5
Full-Time Student, not Employed	9.3	28.9	19.6	17.9	12.1
Full-Time Student Part-Time Employed	9.3	17.8	15.3	21.7	11.9
Unemployed, not Student	7.6	11.1	7.4	7.2	7.7
N =	1190	45	163	235	1633
Percent of Sample	72.9	2.8	10.0	14.4	

Table 6-12 gives the distribution of occupational skill-level during the students' first semester enrolled at the participating college. Two-thirds of the Leisure Skills Students were employed, the majority of these in skilled or supervisory positions. About the same proportion from each of the other prototypes was employed, but held jobs at the unskilled or semi-skilled level. The Leisure Skills Students had the highest proportion of homemakers (17.3 percent) and the lowest proportion of "Students, not Employed" (8.8 percent).

Table 6-12. Special Interest Sample: Fall 1978

Occupational Level

Occupational Level	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Unskilled	11.2	13.0	15.9	16.6	12.5
Semiskilled	20.5	43.5	30.5	29.8	23.5
Skilled	21.1	6.5	15.9	15.3	19.4
Professional or Supervisory	14.0	2.2	2.4	7.2	11.5
Homemaker, not Employed	17.3	4.3	11.6	12.3	15.6
Student, not Employed	8.8	28.3	21.3	15.7	11.6
Other	7.2	2.2	2.4	3.0	5.9
N =	1188	46	164	235	1633
Percent of Sample	72.7	2.8	10.0	14.4	

In summary, the Special Interest Students were older, and had a higher proportion of women and Caucasians than either of the other functions. Correlated with age, they were better educated and more likely to have had been married and have had dependents than students in the other functions. Leisure Skills Students have more homemakers and are more likely to come from previous employment than the other Special Interest groups. During their first semester they held primarily skilled and supervisory jobs. The Lateral Transfers, the Basic Skills Students, and the Explorer/Experimenters held primarily unskilled and semi-skilled jobs.

ENROLLMENT PATTERNS AND ACADEMIC ACHIEVEMENTS

This section describes the Special Interest Students in terms of their enrollment patterns and academic behavior while attending one of the participating colleges.

Table 6-13 shows the distribution of enrollment patterns, distinguishing between continuous and intermittent enrollment. The first interval indicates that 49.4 percent of the students in the total function attended the first term and did not enroll again for the duration of the study. The second interval shows that 11.9 percent attended the first term, were not in attendance the second term, but did return for one or more semesters during the study. Three of the four prototype groups are similar on this variable in that 42 percent to 53.2 percent fell in the first interval and few students showed continuous enrollment. Only the Lateral Transfers differ in their attendance patterns, being more persistent than the other prototypes.

Table 6-13. Special Interest Sample: Enrollment Patterns

Enrollment Pattern	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
First Term Only	51.3	25.9	53.2	42.0	49.4
First Term Plus Return	12.3	7.5	13.5	14.2	11.9
First and Second Term Only	14.9	24.1	14.7	17.1	15.5
First and Second Term Plus Return	4.4	7.5	4.3	5.2	4.5
First, Second, and Third Term Only	6.4	9.3	7.4	5.1	6.4
First, Second, and Third Term Plus Return	1.9	3.8	2.1	2.8	2.0
First 4 Consecutive Terms	3.7	16.7	4.2	5.1	4.4
First 4 Terms Plus Return	0.3	0.0	1.1	1.2	0.5
Five Consecutive Terms	2.0	3.7	1.6	3.1	2.1
Six Consecutive Terms	3.1	1.9	2.1	4.7	3.2
N =	1281	54	190	257	1782
Percent of Sample	71.9	3.0	10.7	14.4	
First Term Only	51.3	25.9	53.2	42.0	49.4
Continuous Enrollment	30.1	55.7	30.0	35.1	31.6
Intermittent Enrollment	18.6	18.4	16.8	22.9	19.0

Table 6-14 reinforces the data reported above showing the number of semesters of enrollment.[1] There are no meaningful differences in enrollment patterns between the Leisure Skills Students and the Basic Skills Students, both averaging two semesters with more than half finishing one semester only. The Explorer/Experimenters were a bit more persistent than they but less so than the Lateral Transfers, with 33.4 percent taking classes for four or more semesters.

Table 6-15 shows the distribution according to the time of day that the Special Interest Students were enrolled in classes during the first semester. Both the Basic Skills Students and the Explorer/Experimenters had a relatively even distribution between the day and evening classes, the Lateral Transfers were predominately day students, while a scant 33.2 percent of the Leisure Skills Students took classes during the day only.

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[1] See footnote, Page 3-18.

Table 6-14. Special Interest Sample: Semesters[1] of Attendance

Semesters Attended	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
1.0	50.9	25.9	52.6	41.2	48.9
1.5	0.4	0.0	0.5	0.8	0.4
2.0	22.6	25.9	20.0	24.5	22.7
2.5	0.4	3.7	0.5	1.6	0.7
3.0	11.2	9.3	10.5	8.6	10.7
3.5	1.1	1.9	1.1	2.7	1.3
4.0	5.5	16.7	5.8	8.2	6.3
4.5	0.9	7.4	2.1	0.8	1.2
5.0	2.9	5.6	3.7	4.7	3.3
5.5	1.0	1.9	1.1	1.9	1.2
6.0	2.0	0.0	1.1	4.3	2.1
6.5	0.7	0.0	0.5	0.8	0.7
7.0	0.5	1.9	0.5	0.0	0.4
N =	1281	54	190	257	1782
Percent of Sample	71.9	3.0	10.7	14.4	
Mean	2.01	2.72	2.00	2.32	2.07
Standard Deviation	1.37	1.50	1.38	1.53	1.41
Percent Attending 4 or more Terms	13.5	33.5	13.7	20.7	15.2
Percent Attending 5 or more Terms	7.1	9.4	5.8	11.7	7.7

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[1] See footnote, Page 3-18.

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Table 6-15. Special Interest Sample: Class Hours

Class Hours	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Day	33.2	60.4	49.5	44.2	37.3
Evening	57.2	20.8	41.9	42.2	52.3
Both Day and Evening	9.6	18.9	8.6	13.7	10.4
N =	1265	53	186	249	1753
Percent of Sample	72.2	3.0	10.6	14.2	

Table 6-16 gives the distribution of SAM majors[1] assigned to Special Interest Students during Fall 1978. About 40 percent of the Special Interest Students were assigned a vocational major on the basis of their first-year enrollments, and almost 20 percent were considered General Transfer Students. Of the Leisure Skills Students, 42 percent were given a Personal Interest code, and 15.8 percent a General Transfer code. As with the previous functions, Business and Management represented the vocational major most frequently assigned to each of the prototypes.

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[1] See footnote 1, Page 3-20.

Table 6-16. Special Interest Sample: SAM Major,[1] Fall 1978

SAM Major Fall 1978	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Agricultural and Natural Resources	1.9	4.0	0.0	2.6	1.9
Business and Management	16.5	22.0	13.8	18.2	16.7
Computer and Information Science	1.3	2.0	1.5	1.0	1.3
Education	1.9	2.0	0.0	3.6	2.0
Engineering and Related Fields	9.2	2.0	11.5	5.2	8.6
Fine and Applied Arts	5.6	4.0	0.8	3.1	4.8
Health Occupations	1.8	6.0	0.8	0.5	1.7
Home Economics	2.4	0.0	2.3	2.1	2.3
Public Affairs and Services	1.5	0.0	2.3	4.2	1.9
General Transfer	15.8	36.0	26.9	30.7	19.6
Personal Interest	42.0	22.0	40.0	28.6	39.3
N =	1048	50	130	192	1420
Percent of Sample	73.8	3.5	9.2	13.5	

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[1] See footnote 1, Page 3-20.

Table 6-17 shows the distributions of the highest SAM Class[1] assigned during the project. Just over half of the Special Interest group were considered vocational students on the SAM criteria sometime during the study. The Basic Skills Students had, by far, the highest percentage that were never assigned a vocational class, 59.9 percent; Lateral Transfers had the fewest in this interval, 33.4 percent.

Table 6-17. Special Interest Sample: Highest SAM Class[1]

Highest SAM Class	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Specific Occupational Major	17.7	33.4	11.6	16.0	17.3
Broad Occupational Area	13.8	16.8	13.1	19.1	14.2
Occupational Area not Determined	20.6	16.7	15.4	17.5	19.4
Non Occupational Major	48.6	33.4	59.9	47.5	49.1
N =	1277	54	190	257	1778
Percent of Sample	71.8	3.0	10.7	14.5	

Tables 6-18 and 6-19 show distributions for the number of courses passed during the three-year study and the average courses passed per semester. More than 85 percent of the total group passed five courses or fewer, and 2.4 percent passed more than 15 courses.

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[1] See footnote 2, Page 3-20.

Considering the enrollment patterns reported above, that is, more than 70 percent attended two or fewer semesters, these data are not surprising.

Table 6-18. Special Interest Sample: Number of Courses Passed

Number of Courses Passed	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Zero	31.9	11.1	37.0	25.7	30.9
1 - 5	56.3	40.7	43.9	54.1	54.2
6 - 10	7.4	24.1	10.6	10.9	8.8
11 - 15	2.9	13.0	5.8	4.3	3.7
16 - 20	0.9	9.3	1.6	1.9	1.3
21 and over	0.7	1.9	1.0	3.2	1.1
N =	1281	54	189	257	1781
Percent of Sample	71.9	3.0	10.6	14.4	
Mean	2.38	6.74	3.09	3.69	2.78
Standard Deviation	3.76	5.92	4.66	5.31	4.28

Table 6-19 verifies the previous finding in that almost three-quarters of the Special Interest sample passed either no courses or one course per semester. In both Tables 3-18 and 3-19 the Lateral Transfer is the exception; they are more persistent than others in the Special Interest sample. However, any conclusions reached must be tentative; only 54 persons assigned to that prototype reported.

Table 6-19. Special Interest Sample: Courses Passed Per Term

Courses Passed Per Term	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Zero	34.0	11.1	38.8	29.0	33.1
1	44.8	20.4	28.7	35.7	41.0
2	12.3	18.5	13.8	20.0	13.7
3	5.1	27.8	10.1	7.8	6.7
4	2.3	14.8	5.3	4.7	3.3
5 and over	1.6	7.6	3.1	2.8	2.2
N =	1280	54	188	255	1777
Percent of Sample	72.0	3.0	10.6	14.4	
Mean	1.19	2.48	1.54	1.59	1.34
Median	0.86	2.86	0.89	1.09	0.91
Mode	1.00	3.00	0.00	1.00	1.00

Tables 6-20 and 6-21 report the distributions of the number of units passed and the units passed per semester by the Special Interest sample. These data verify those results previously reported on courses passed. More than 80 percent passed 10 units or fewer, and almost 75 percent averaged 3.5 or fewer units per term. Again, the Lateral Transfer Student was the exception to these generalizations.

Table 6-20. Special Interest Sample: Number of Units Passed

Number of Units Passed	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Zero	32.8	11.1	38.6	26.1	31.8
1 - 10	51.3	29.6	37.0	49.8	48.9
11 - 20	9.6	14.9	12.2	12.4	10.5
21 - 30	3.2	22.2	6.3	3.9	4.2
31 - 40	1.5	11.2	3.2	3.8	2.3
41 and over	1.5	9.3	2.6	4.0	2.1
N =	1281	54	189	257	1781
Percent of Sample	71.9	3.0	10.6	14.4	
Mean	5.55	18.87	7.66	8.76	6.64
Standard Deviation	9.41	17.23	11.59	13.15	10.85

Table 6-21. Special Interest Sample: Units Passed Per Term

Units Passed Per Term	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Zero - 1.5	49.6	14.8	45.5	41.8	47.0
1.6 - 3.5	28.5	14.8	20.6	25.4	26.8
3.6 - 5.5	9.8	7.4	13.2	14.1	10.7
5.6 - 7.5	5.9	20.4	7.4	7.8	6.8
7.6 - 9.5	2.6	18.5	6.3	4.7	3.8
9.6 - 11.5	1.6	9.3	3.2	2.7	2.1
11.6 - 13.5	1.1	11.1	2.1	2.7	1.7
13.6 and over	0.9	3.8	1.5	0.8	1.0
N =	1281	54	189	256	1780
Percent of Sample	72.0	3.0	10.6	14.4	
Mean	2.76	6.93	3.83	3.78	3.20
Median	1.53	6.77	1.94	2.15	1.72
Mode	0.75	6.50	0.75	0.75	0.75

Table 6-22 shows the percentage of units passed by each of the Special Interest prototypes, derived by dividing the average number of units passed by the number of units attempted. There is wide variation among the prototypes. The Basic Skills Students passed a scant 59 percent and the Lateral Transfers, 83 percent. The largest group, the Leisure Skills Students, passed 64 percent of the units they attempted.

Table 6-22. Special Interest Sample: Percentage of Units Passed

Special Interest Prototypes	Average Units Attempted	N	Average Units Passed	N	Percentage Units Passed
	%	%	%	%	%
Leisure Skills	8.71	853	5.55	1281	64
Lateral Transfer	22.78	46	18.87	54	83
Basic Skills	12.96	97	7.66	189	59
Explorer/Experimenter	12.41	180	8.76	275	71
Total	10.18	1176	6.64	1799	65

Table 6-23 gives distributions of Grade Point Averages. The Leisure Skills Students had an extreme diversity, having had the largest proportions in both the highest and lowest intervals. The Lateral Transfers, considering their persistence, maintained reasonable Grade Point Averages. The GPA for the Special Interest Function was influenced in that 41 percent averaged one course per term, and an additional 13.7 percent only two courses per term. These enrollment patterns make it easier to maintain a high GPA.

Table 6-23. Special Interest Sample: Grade Point Average

Grade Point Average	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Zero	2.7	0.0	2.2	1.7	2.4
0.1 - 0.5	0.5	0.0	1.1	0.6	0.5
0.6 - 1.0	4.1	2.2	4.4	2.9	3.9
1.1 - 1.5	1.7	4.3	11.1	8.0	3.5
1.6 - 2.0	13.9	15.2	21.1	16.6	14.9
2.1 - 2.5	9.5	26.1	20.0	17.1	12.2
2.6 - 3.0	24.6	17.4	26.7	23.4	24.3
3.1 - 3.5	13.4	17.4	5.6	6.3	11.8
3.6 - 4.0	29.7	17.4	7.8	23.4	26.5
N =	829	46	90	175	1140
Percent of Sample	72.7	4.0	7.9	15.4	

In summary, the Special Interest Function comprises an extreme diversity of students. As a group, they do not tend to persevere in their community college studies; almost half attended one semester only, and over 70 percent attended two semesters or fewer. The largest category, Leisure Skills Students, attend predominately in the evening, while the Basic Skills and Explorer/Experimenters are split between day and evening. During the first year of the study, about 40 percent of the Special Interest Students were assigned a vocational major, and just over half were, at some point, categorized as vocational students according to SAM criteria. As with students in the other functions, the most popular vocational area is

Business and Management. The Special Interest Students tended to take and pass few courses. On the average, they passed 2.78 courses during the life of the project, 1.34 courses per semester and 65 percent of the units they attempted. They maintained reasonable Grade Point Averages, with the Basic Skills Students having the lowest average.

The Lateral Transfer prototype is the exception to the above summary. The Lateral Transfer pattern is more like the Technical Transfer described in Chapter 3. However, only 54 persons, or 3 percent, of the Special Interest sample were in the Lateral Transfer category.

THE EFFECTS OF THE COMMUNITY COLLEGE EXPERIENCE

During the final data collection period in 1980-81, the Special Interest Students were asked four questions to help determine the effectiveness of their college experiences:

1. "We want to know how your time at Pierce[1] College benefited you. Can you tell me about it?"
2. "How many more semesters do you think you will attend?"
3. "Have your goals remained the same, or did you want to learn more while you were at Pierce[1] College?"
4. "Did you get what you came here for?"

Tables 6-24 through 6-30 give the distributions of the responses of the Special Interest sample to these questions.

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[1] The name of the appropriate participating college was inserted for each question.

Table 6-24 gives the distributions for the Perceived Benefits question. The interviewer chatted with the students and was permitted to code in one or two of the ten possible responses[1] for each student. Only 4.3 percent claimed they received no benefits. Sixty-nine percent of the Lateral Transfers included "Preparation for the Lateral Transfer" as a benefit, and 79 percent of the Basic Skills Students included "Basic Skills" as a benefit. The modal responses of the Leisure Skills Students was "Home or Hobby Skills" (40 percent). The other frequently mentioned benefits of the Leisure Skills group were: "Artistic Production," "Knowledge of the World," and "Sports or Body Conditioning." The modal response of the Explorers/Experimenters was "Exploring the Future."

Table 6-25 shows the distributions of responses to the question of future enrollment. The modal response for all prototypes, 40.9 percent to 44.3 percent, was "Unsure." The second most frequent response for all prototypes was, "Zero," indicating they definitely did not plan to again attend. These two intervals, "Unsure" and "Zero," accounted for 67.2 percent of the respondents. For the total group, 19 percent expected to attend four or more semesters in addition to their previous attendance.

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[1] Because two responses were permitted, the columns sum to more than 100 percent.

Table 6-24. Special Interest Sample: Perceived Benefits[1]

Benefit	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
No Benefits	3.3	0.0	7.1	8.3	4.3
Home or Hobby Skills	39.9	0.0	10.7	16.0	33.0
Artistic Production	17.3	3.8	0.0	6.9	14.0
Know About World	21.7	3.8	6.0	20.8	19.8
Cultural Exposure	6.0	0.0	1.2	1.4	4.8
Sports or Body Condition	18.9	11.5	2.4	13.9	16.6
Exploring for Future	13.7	15.4	4.8	43.1	17.2
Basic Skills	7.1	26.9	78.6	12.5	14.4
Lateral Transfer Preparation	2.4	69.2	10.7	5.6	5.3
Other Benefits	13.0	15.4	31.0	16.0	15.0
N =	747	26	84	144	1001
Percent of Sample	74.6	2.6	8.4	14.4	

Table 6-26 shows the distributions of the responses to the question on goal stability. With the exception of the Lateral Transfer, about three-quarters of the sample maintained the same goal, and one-fourth developed new goals.

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[1] Because two responses were permitted, the columns sum to more than 100 percent.

Table 6-25. Special Interest Sample: Future Attendance

Semesters	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Unsure	43.4	40.9	43.3	44.3	43.5
0	23.8	18.2	16.7	27.8	23.7
1	4.7	4.5	6.7	6.1	5.1
2	5.5	18.2	13.3	4.3	6.3
3	1.8	4.5	3.3	5.2	2.5
4 or more	20.7	13.6	16.7	12.2	19.0
N =	613	22	60	115	810
Percent of Sample	75.7	2.7	7.4	14.2	

Table 6-26. Special Interest Sample: Goal Stability

	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Goals Same	78.4	52.9	74.6	72.0	76.7
New Goals Developed	21.6	47.1	25.4	28.0	23.3
N =	580	17	59	107	763
Percent of Sample	76.0	2.2	7.7	14.0	

Table 6-27 shows responses to the critical question asking students if they received from the college that for which they came. Overall, 55.3 percent of the sample indicated complete satisfaction, with Basic Skills Students having the smallest percentage in that interval (32.4 percent), and the Leisure Skills Students having the greatest, (61.5 percent).

Table 6-27. Special Interest Sample: Goal Satisfaction

	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Not at all	6.9	9.1	19.7	15.7	9.2
Somewhat	31.6	50.0	47.9	46.3	35.4
Completely	61.5	40.9	32.4	38.0	55.3
N =	623	22	71	108	824
Percent of Sample	75.6	2.7	8.6	13.1	

In the opposite interval, that is, "Not at All," the proportions reversed with 19.7 percent of the Basic Skills Students and only 6.9 percent of the Leisure Skills Students denying any benefits.

After two semesters had passed, each interviewed student was asked to grade the college overall from A through F. Table 6-28 gives the results of this grading procedure. A perusal of the table indicates very high grades were given with few meaningful differences between prototypes. The Basic Skills Students assigned the lowest grades.

Table 6-28. Special Interest Sample: Student Grade of College

	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Excellent	34.0	41.4	25.0	26.8	32.4
Very Good	46.1	48.3	52.8	54.5	47.9
Satisfactory	12.5	3.4	13.9	16.1	12.8
Poor but Passing	1.9	0.0	1.4	1.8	1.8
Failing	0.2	3.4	0.0	0.0	0.3
Unsure	5.5	3.4	6.9	0.9	4.9
N =	586	29	72	112	799
Percent of Sample	73.3	3.6	9.0	14.0	

Table 6-29 shows the usage and evaluation of the Special Interest Students for counseling. Of most interest is that only 196 of the more than 1,000 Special Interest Students contacted during 1980-81 used the counseling service. Of this group, more than one-half were "Completely Satisfied," and just over 10 percent were "Unsatisfied." The use of other student services was considerably lower than that for counseling, and as a consequence, the distributions are not presented.

Table 6-29. Special Interest Sample, Counseling: Usage and Evaluation

Number of Visits and Evaluation	Leisure Skills	Lateral Transfer	Basic Skills	Explorer/ Experimenter	Total
	%	%	%	%	%
Once Unsatisfied	9.1	0.0	6.3	4.5	6.6
Once Part Satisfied	13.1	14.3	15.6	13.6	13.8
Once Completely Satisfied	29.3	14.3	15.6	27.3	25.0
Twice Unsatisfied	1.0	0.0	3.1	4.5	2.0
Twice Part Satisfied	14.1	4.8	0.0	9.1	9.7
Twice Completely Satisfied	15.2	23.8	21.9	15.9	17.3
Three or More Unsatisfied	1.0	9.5	3.1	0.0	2.0
Three or More Part Satisfied	5.1	9.5	3.1	4.5	5.1
Three or More Completely Satisfied	12.1	23.8	31.3	20.5	18.4
N =	99	21	32	44	196
Percent of Sample	50.5	10.7	16.3	22.4	

Table 6-30 gives the percentage of each prototype in attendance for the sixth or final semester of the study. Overall, the 9.3 percent of the Special Interest group were in that category, the lowest of the three functions. The Explorer/Experimenter had 13.6 percent in attendance, the only deviation from the norm.

Table 6-30. Special Interest Sample: Percentage Attending Spring 1981

Special Interest Prototype	Number Attending	Number in Sample	Percentage Attending
			%
Leisure Skills	111	1281	8.7
Lateral Transfer	4	54	7.4
Basic Skills	16	190	8.4
Explorer/Experimenter	35	257	13.6
Total	166	1782	9.3

It is difficult to summarize and judge the effects of community college experience on as diversified a group as the students in the Special Interest Function. Though the four questions asked during the final interview were appropriate for all of the Special Interest Students, there is little defensible evidence we can get concerning the success of the college in providing the help and fulfilling the varying needs represented. However, what evidence we do have indicates that the Special Interest Function, as carried out by the community colleges, is a success.

When asked about their perceived benefits, only 4.3 percent saw no benefits in their studies; 3.3 percent of the Leisure Skills group. The remaining 95 percent benefited, most from home or hobby skills and about equally from artistic productions, information about the world, sports skills, exploration of their futures, and basic skills (largely English as a Second Language). Over half of the group indicated more than one benefit was derived from their studies. Another indication of the success of our Special Interest Function is plans for future attendance. Though more than three-quarters of the group were either unsure or did not plan to again attend, 19 percent of the total and almost 21 percent of the Leisure Skills Students planned to attend four or more semesters.

More than three-quarters of the Special Interest Students maintained their initial goal; implying that they had, or would soon complete, the goal for which they entered. The remaining 23.3 percent had developed new goals without evidence of whether or not they were met.

The critical question was the students' preception of goal satisfaction. More than 90 percent of the Special Interest Students said their goals were satisfied, either somewhat or completely; 9.2 percent indicated no satisfaction. The largest portion who were dissatisfied were the Basic Skills Students (19.7 percent) and the Explorer/Experimenters (15.7 percent). Of the Leisure Skills Students, only 6.9 percent were dissatisfied in the progress toward reaching their goals. When interviewed, students expressing dissatisfaction frequently attributed it to their own lack of perseverance, skill, persistence, or discipline, rather than projecting their unhappiness to any characteristics of the college or the courses.

The Special Interest Students made very little use of any of the student services. Those that did use them rated both the services and the college high. During the last semester of the study, 9.3

percent were in attendance, and it would appear many will remain in attendance for a number of semesters to come.

Because the Special Interest Students were assigned to prototypes nominally unrelated to the Vocational or Transfer Functions, measures of their improved job status and salary and the proportion that transferred to baccalaureate-granting colleges have not been reported above. SLS data indicate that a considerable improvement in their jobs did occur. There was a decrease in the proportion of unskilled jobs held and an increase in hourly pay of $1.71; the average increase for the Basic Skills Students was $2.72. Further, of those Special Interest Students contacted, 4.9 percent had transferred to baccalaureate-granting institutions; 6.2 percent of the Explorer/Experimenters. When one remembers that 13.6 percent of the Explorer/Experimenters were in attendance during the sixth semester, it is a warranted inference that about 20 percent of the students who originally enrolled to determine their educational or vocational future will transfer to senior colleges.

The important question concerning the Special Interest Students is whether or not credit courses at a community college are the appropriate vehicle to meet their educational needs. Many argue that, for the Leisure Skills Students, Community Services classes would be more appropriate and economically more defensible than credit classes, since Community Services are financially self-sustaining. Likewise, an argument has been raised about the students who want basic skills--whether they be fundamental academic skills or English as a Second Language. Should they be taken in high schools or adult schools offering the same basic skills instruction as the community colleges at much less expense to the taxpayer? Data from the SLS throw no light on the answer to these philosophical issues, but do indicate the extent to which our educational resources are being spent on the Special Interest Function.

Chapter 7

Summary, Commentary and Speculations

The four published interim SLS reports and the first six chapters of this final report have some semblance of academic propriety (a standard which passes these days for scholarliness). This last chapter does not maintain the standard. As Project Director, having devoted a large portion of my professional time, energy, and soul to the Statewide Longitudinal Study for more than four years, I use this last chapter to explain contradictions and paradoxes, and to speculate about the meaning of some of the data presented earlier; all of this with no substantive evidence to support my assertions. Warning: these comments are informal--first person pronouns abound.

In this chapter I describe potential sources of inaccuracies that exist in the data and speculate (sometimes with minimal evidence) about what the data mean. Having examined three years' worth of information about almost 6,500 students, I know more about California Community College students than anyone in the world; my speculations should not be taken lightly. (Conversely, I know little about educational finance or educational legislation; look for no recommendations in those areas.)

SAMPLING GOOFS

If you had the stamina to read all five SLS volumes, you saw apparent contradictions in the data, particularly in the number or percentage of students in a particular sample or subsample. We started the first semester with slightly less than 8,000 students; we ended with 6,490. There are many reasons for the shrinkage. First, as Project Director, I decided to eliminate from the sample all students whom we had not interviewed in Fall 1978, and had not reenrolled in Spring 1979. I then compounded this error by making implementation of this decision optional. As expected, some coordinators followed my advice and some didn't.

In order to encourage coordinators to work hard to complete interviews, I wrote into the college performance contracts a "per subject" clause, to wit, the more students in a college's sample, the more money received. As a consequence, many coordinators carried students on whom they had no interview data and little or no college record data. This mistake became evident when I first received the analyses for this report and saw that the number in the total sample had grown to more than 7,500 students. Several hundred of these could not possibly be a legitimate part of our sample because the largest number in the Spring 1980, sample was 7,157. We reduced the sample to an appropriate size by using three criteria for inclusion:

1. At least one interview
2. Two out of three of the demographic variables (age, sex, ethnicity)
3. A final Prototype

Applying these criteria reduced the sample to a dependable and legitimate 6,490 students.

Numbers also vary within subsets of the sample. Though the variations are sometimes extreme, there are legitimate and acceptable reasons. For several of the structured interviews, questions were asked of only specific subsets of respondents, for example, vocational prototypes. Further, some questions asked were contingent upon responses to previous questions, for example, "Are you now attending a four-year college?" If yes, "is your major the same?" You can see how the 2,400 students in the transfer prototypes could be reduced to as few as 200 or 300 responses to such a question. Further, the number reported in each analysis of interview data varied with the number of students who participated in a credible interview.

Said another way, the SLS has always had a dynamic data base. Variations in numbers and percentages through the years, and even within a single report, have been caused by management decisions about sampling, by the variability in the proportion of the sample interviewed, and by the error correction cycle described on pages 2-21 through 2-23 of this report. Numbers reported in all tables were accurate within the context of the time, the subsample being described, and the contingency questions.

It was necessary to have evidence that the sample was not distorted by questionable sampling decisions and purging. To achieve this, a comparison was made between the students remaining in the sample and those who were rejected. The comparison was on the variables sex ratio, ethnicity, last school attended, and original educational objective. This is what we found.

On sex ratio and ethnicity, the largest proportion of those rejected from the sample were "unknown." It is not surprising that two-thirds of those rejected had "unknown" ethnicity, and 12 percent were of "unknown" sex, because lacking data on sex and ethnicity was a criterion for excluding a student from the sample. Of those students rejected whose sex was known, the proportions showed the same trend as those accepted for the sample, that is, many more women than men.

For ethnicity, there were few on which to make a comparison, but it appeared that slightly more Blacks and Hispanics than Caucasians were eliminated from the sample.

For the variables "last school attended," and "original educational objective," more than 85 percent of the rejected group had missing data. Again, the reason is that completion of at least one interview was a criterion for inclusion in the sample, and data for these questions were from the first interview. For the few rejected students who had useable data on these variables, the same trends appeared for the purged group as in the sample proper.

The comparisons described above indicate that the representativeness of the sample was not seriously impaired by the application of the criteria used for purging it.

The colleges differed in the proportion of students who had been carried as part of their sample, and on whom insufficient data were available. One college accounted for more than 30 percent of the loss, four colleges accounted for more than 70 percent, and seven colleges accounted for less than 2 percent each of the purged group.

PROTOTYPING

Another potential source or error is the unknown number of mistakes made in prototyping. The reliability of prototyping is acceptable; most of the reliability tests indicate interjudge reliabilities of 80 percent or the equivalent of reliability coefficients that approach 0.90. However, it is difficult to assess the validity of the prototyping, that is, what proportion of the students assigned to a prototype were well characterized by the prototype description. Why, for instance, should 7.5 percent of the Undisciplined Transfers have already transferred? (Table 4-24.) By definition, the Undisciplined Transfer has little chance of transferring.

Though the data were not presented in this report, there were large differences among colleges between the numbers and proportions of students assigned to the less prestigious prototypes (the Undisciplined Transfer, the Inter-collegiate Athlete, and the Financial Aid Seeker). These data also indicate that in colleges where one might reasonably expect to find an average or above average number of the less prestigious prototypes, few students were assigned to these categories. Because the data throughout this final report are based on prototyping, they lose authenticity to the extent that the prototyping process was not carried out with appropriate consideration and care.

I do not mean to imply that a large proportion of students were incorrectly assigned to prototypes. On the contrary, the data from Chapters 3 through 6 substantiate and, in a sense, validate that appropriate assignments were made in the vast majority of cases. I mean, rather, to caution you that, when dealing with data such as have been presented, five-place decimal precision cannot be expected.

FINDINGS

Given the four previous reports and this final report, this is what we determined about community college students.

The Transfer Function

Kissler and others (1980) have reported that California Community Colleges are transferring fewer students to both UC and CSUC, and that those whom we do send are not doing as well at the university as their counterparts of a decade ago. There are no data presented in this report that contradict Dean Kissler's findings. However, researchers from UC and CSUC have only computer-generated data to determine whom they will assign as a community college transfer, and for whom they will give the community college credit for assisting. Though there are differences in the criteria used by UC and CSUC for categorizing a student as a community college transfer, they generally require that at least 12 units of work be completed at a single community college within a specified time before enrolling at the university. As reported in Chapter 4, many students may have transferred with fewer units than are required, particularly those who were university-eligible from high school. Some are reverse transfers who started at the university and transferred to the community colleges for a time, possibly for financial or academic reasons. Said another way, the reports from different organizations concerning the number of students who transfer from community colleges to the university seldom use comparable data in reaching their conclusions.

Using university criteria, I agree with Dean Kissler that fewer students transfer to the university from the community college now than did ten years ago. However, I reject the reasons inferred by him and others that community colleges are neglecting the Transfer Function. A decade ago, a larger proportion of our students came from high school intending to transfer to the university, and many more were university-eligible, but chose to enroll in the community college. For the last several years, the number of high school graduates has declined, and this decline is expected to continue through 1991. (WICHE, 1979.) Further, it appears that the universities are expending more effort to recruit high school graduates than in the past. As a consequence, though the number of students attending California Community Colleges continues to increase, a shrinking proportion who enroll come directly from high school aspiring to transfer to the university, and fewer are university-eligible than in years gone by.

When the unanswerable question, "What proportion of your students transfer,?" is asked, the wise community college professional doesn't give an answer, but rather responds with the question from Gold's 1981 article, "Proportion of What?" I assert that the answer to the "what," the denominator of that fraction, should be the number of students who fall into the prototypes Full-time, Part-time, or Technical Transfers as described on page 1-30. Further, when making a judgment about the percentage who transfer, one should consider an "entering class" and estimate what proportion of those that seek (and are capable of) transfer will eventually get a shot at the university and a bachelor's degree. Data in Chapter 4 indicate that two or three years is an inadequate period to follow students to answer questions about transfer. One can make reasonably acceptable estimates after four years. Further, the data indicate that those who come to community colleges with a modicum of academic ability and the intent to transfer to the university represent about a quarter of first-time students in a fall semester. Of those, 50 percent to 60 percent will transfer.

To summarize my thoughts, inferences, and speculations about the transfer function: fewer students are sent to the public universities because there are fewer whose goal is to transfer. Those who do come to transfer and who have some reasonable level of academic competency are well served, equally as well as they were served a decade ago.

The change in student body and the inadequacy of preparation with which some high school graduates enter the community college is evidenced by the number assigned to the prototypes Undisciplined Transfer, Inter-collegiate Athlete, and Financial Aid Seeker. Because several of the project coordinators seemed loathe to assign their students to these categories, only 28 percent of the transfer prototypes were so classified. A realistic estimate would be 33 to 35 percent. Further, the Basic Skills Students within the Special Interest Function is at least partially composed of students who wish to transfer but recognize their lack of academic skills. In attempting to serve everyone, community colleges are expending many resources (the educational euphemism for "a lot of money") on remediation. The old "dummy English" course has been gussied up with titles that include "Remedial," "Repair," and finally, "Developmental Communications." Regardless of the name, all public community colleges in the country spend a significant portion of their budgets to teach sub-college reading, writing, and arithmetic. In spite of the money and effort, I have seen no data from any community college in the country to prove that an American-educated student, graduating from high school and reading at the 6th grade level, can, in a reasonable amount of time, be transformed into even a mediocre college freshman.

The "cooling out" function, (Clark, 1961) was a hypothesized, informal set of counseling procedures intended to redirect students with inadequate skills to something other than transfer classes. "Cooling out" evolved from the observation of one person, for one semester, at one college. Cooling out was never verified. Twenty years ago there were inadequate community college students who wanted to transfer to the university, just as there are today. Then, they represented a smaller proportion of the student body. There is no evidence that "cooling out" was, or is, anything more than these unskilled students dropping or failing transfer-level courses. The important question is this: how much time and money should community colleges spend on the (fruitless?) task of trying to bolster the academic insufficiencies of their students.

I recommend that California Community Colleges institute a system-wide measure of student intent and a program of screening assessments--assessments that would reduce the waste of time and money that comes from trying to "make silk purses."

The Vocational Function

Professor Wilms (1980) would have us believe that few people finish community college programs, and those that do, don't get jobs. Professor Pincus (1981) claims that we have failed to establish social equalization through vocational education in community colleges. These and others, peering down at community colleges from the summits of their "ivory towers," need to adjust their binoculars.

Chapter 5 data indicate that Wilms is right about students not completing programs. But Wilms neglected to tell you that less than a quarter of vocational students come to the college with any thought of finishing a program. Most neither care about, nor identify with, programs; they came for specific courses and specific skills. This is not a universal truth. A few of the programs listed in the community college catalogs attract and hold students (most notably, the Registered Nurse program). Those departments that have that prerogative of refusing admission attract the prototype Program Completer.

Data indicate that most of those who do care about programs (the Program Completer and some of the Career Changers) maintain continuous enrollment for many semesters and attribute credit for getting jobs, raises, and promotions to the community college.

Most vocational students enroll to learn or improve specific occupational skills. The Job Up-Graders responded more positively to the community college than almost any other prototype. They, too, gave credit for raises and promotions to their community college training. The Job Seekers, those who wanted to learn skills quickly to find respectable employment, were not quite as enthusiastic as other vocational students about the results. Many achieved their short-range goals, but others seemed disappointed. This group requires further study.

Evidence has not been presented that proves Professors Wilms and Pincus wrong. They simply have failed to look at community college students in any manner that approaches research respectability. As a consequence, their conclusions and recommendations are of no value in planning or decision-making for community colleges.

Chapter 5 data clearly indicate that in 1980-81 community college students had better jobs, requiring higher skills and demanding higher pay, than when they first enrolled in Fall 1978. And, in the opinion of most students, their studies at the community colleges were largely responsible for their career improvement.

The Special Interest Function

Almost three-quarters of the Special Interest Students were Hobbyists, Culture Seekers, and Education Seekers. It is questionable whether they should be using our regular credit courses to satisfy their goals. This group was composed primarily of students older than the norm, largely Caucasian, having at least some previous college experience, and many having a college degree. Because they are older and have better jobs than students from the other prototypes, they pay more taxes than others. Nonetheless, the question remains whether their use of the community college falls within the guidelines of the "Master Plan" or the mission and functions as defined by the Board of Governors of the California Community Colleges or the California Post-secondary Education Commission (CPEC). Though the Leisure Skills Students represented about 20 percent of those entering in Fall 1978, more than half stayed for one semester only, and almost three quarters for two or fewer semesters. Further, almost 80 percent averaged one course per semester or less. In other words, though the Leisure Skills students are a fifth of the entering cohort, they are a considerably smaller proportion of a cross section of the community college student body, regardless of when the cross section is taken. As a consequence, though these Leisure Skills students are ubiquitous, they represent a very small proportion of the Weekly Student Contact Hours (WSCH).

Because of the community colleges' present economic travail, there has been speculation about eliminating Leisure Skills Students from credit classes either by having them use Community Services for their learning experiences, or by having them pay a fee to cover part of the cost of their instruction. The task of separating the Leisure Skills Students from the Transfer or

Vocational Students is difficult. How does one differentiate a student taking a Motor Tune-up course for his personal edification from a student next to him whose goal is to become an auto mechanic? Certainly, there are procedures to filter out a portion of the Hobbyist and their ilk, but the methods are complex and difficult to implement. It is not our purpose to determine who or what should be taught, but rather to describe who and what is being taught, and to suggest how much effort community colleges are using in teaching different people different things.

A second group among the Special Interest Students about whom there is a question are the Basic Skills Students. This group comprises both students who lack academic skills to pursue vocational or transfer goals, and foreign students (primarily Mexican and Southeast Asian) who are trying to improve their English skills. Though both groups are worthy, is this kind of instruction appropriate for community colleges? ESL and basic academic skills are taught by adult evening schools at a cost considerably less than an equivalent community college course. On the other hand, recent émigrés and high school graduates with mild and reasonable learning deficiencies, whose intent is to seek further education, should certainly be assisted by the community colleges. A remedial language program of some name ("dummy English" or Subject A) has always been part of the University of California curriculum. The important question for those who decide the community college curricula is simply this: how basic is basic? I assert that students accepted into remedial courses should have a reasonably high probability of learning enough in one year or less to participate in a transfer, vocational, or general education program at the community college.

Data presented in Chapters 3 through 6 of this report indicate that community colleges have done an excellent job in helping students in each of the three major functions. However, this is not the equivalent of perfection--not 100 percent success. There were students who were not treated appropriately. There are failures in each of the functions and all of the prototypes. Though the number of these failures is small, they should not be ignored or forgotten. Rather, questions must be asked and answers sought for those students who were not assisted in meeting their goals. What happened to the Full-time, Part-time, and Technical Transfer Students who did not transfer and are no longer in attendance? Where are the Job Seekers who didn't learn the skills to get the jobs they wanted and are employed in jobs not related to their studies? Why did a very large proportion of Basic Skills Students not finish the courses in which they were enrolled? These questions should have the highest priority in research sponsored by community colleges and CPEC.

The CPEC Commission report, (1981, page 14), speculates,

> "There is a reluctance in the Community Colleges to establish priorities among student clienteles, programs, and services; and they may be increasingly unable to do everything well by being continually more efficient and more productive. If choices and priorities are not made, the result will probably be to do everything less well and some things unsatisfactorily."

This assertion is neither an inductive inference nor a deduced truth. Many noneducational institutions diversify to considerably greater extent than have community colleges. Soft drink companies run airlines; stock brokers run coal mines; all seem to profit if the management is competent. California Community Colleges have, indeed, extended the number and types of educational experiences they offer. But data from Chapters 3 through 6 indicate that, unlike th CPEC prediction, our traditional tasks are still being carried out satisfactorily, and those students served by our newly acquired tasks appreciate and praise California Community Colleges. However, as funds shrink, the establishment of priorities referred to in the CPEC report becomes a necessity.

QUESTIONS; ANSWERABLE AND UNANSWERABLE

During the last four years, I have given scores of talks about the SLS to community college organizations and faculties. Without exception, at the close of each speech, the audience asked questions about the project. These were reasonable questions that could be answered only if the data were analyzed in a manner other than the analyses that had been performed or were planned. (There are almost 20,000 bivariate analyses alone that could be produced from the SLS data. Though it may seem that you have read all 20,000 in this report, this is not the case.) The data contain evidence to help answer some of the questions asked by my audiences, by professional organizations such as CPEC and the University of California, and questions suggested earlier in this report. Three steps are being taken to use SLS data to answer the legitimate and answerable questions that have been raised.

First, twenty-five copies of the taped SLS data base and a code book are being duplicated and distributed throughout the state. Among the recipients are:

- University of California, Los Angeles
- University of Southern California
- California Postsecondary Education Commission
- Chancellor's Office of California Community Colleges
- California Advisory Commission for Vocational Education
- the 15 colleges that participated in the SLS
- Center for the Study of Community Colleges
- ERIC Clearinghouse for Community Colleges
- Center for the Study of Research in Vocational Education, Ohio State University

When researchers from these organizations have access to the data base, they will be able to seek answers to many of their questions about California Community College Students.

Second, 12 community college professionals will evaluate SLS data and point out the implications for their areas of expertise. The papers will be edited and published by the Chancellor's Office of California Community Colleges, with the assistance of Dr. Thomas MacMillan of Mendocino College. Copies will be available from the Chancellor's Office or the ERIC Clearing House. Specialities to be examined are:

- Admissions and Records
- Community Services
- Research and Development

- Student Services
- Business and Industry
- Curricula
- Articulation
- College Staffing (including Training)
- Accreditation and Evaluation of Programs and Services
- Vocational Education: National Priorities
- Vocational Education: Administration and Instructional Programs
- Finances: Legislation and Facilities Planning

Third, having been granted a sabbatical leave for the academic year 1982-83, I plan to devote my professional energies to further analyses of the SLS data. Examples of the topics I plan to examine are:

- Women over 30 as community college students
- Hispanic community college students
- Black community college students
- Correlates of attrition
- Predicting student prototypes

These three steps should help to answer the legitimate questions, questions that have answers.

Unfortunately, naive educators, legislators, and publics are inclined to ask unanswerable questions, the most common of which are:

1. "What proportion of your students transfer?"

2. "What proportion of your students are vocational students?"
3. "What is your dropout rate?"

These appear to be legitimate questions that each college, each district, and the Chancellor's Office should have answers for. But, as presented, each question is meaningless. The first, concerning transfers, has already been discussed.

The second, concerning vocational students, has been attacked for many years. In 1972, Ben Gold of Los Angeles City College initiated a Vocational Education project, the Student Accountability Model (SAM). The first question the project attempted to answer was, "What is a vocational student?" It was demonstrated that one could use neither what students declared as their major on registration forms or what they claimed in an interview to determine whether they were vocational students. The criteria for defining vocational students were their enrollment in vocational courses, the level of the vocational courses in which they enrolled, and in some instances, the proportion of units they carried that were in vocational courses. The logical paradigm to determine whether a student was vocational, though not complex, was complete (Gold, 1981, pages 7 through 20). For the first three interim reports for the SLS, the SAM definition for vocational students was used.

With the advent of prototyping, the SLS used a new definition for vocational students. Many of the students in transfer prototypes as well as a large proportion of the Hobbyists, Lateral Transfers, and Explorer/Experimenters were enrolled in vocational courses.

However, their intent was to use the vocational skills they learned either to help fill their leisure time or to seek employment in the field they studied only after further training at another school or college. Though SAM would have considered each of these students as part of the vocational function, they were placed in the Transfer or Special Interest Function for the SLS.

Questions about the proportion of vocational students must be qualified by who one wants to include in the group. About 70 percent of any entering group enroll in one or more vocational courses during the first three years of their community college career. Each could be included, depending on the criteria used.

Questions about dropout rates are usually meaningless. The SLS identified seven kinds of dropouts:

1. Those who were admitted, but never enrolled.
2. Those who enrolled, but never attended class.
3. Those who attended class, but left before Census Week.
4. Those who dropped some classes before Census Week.
5. Those who dropped out after Census Week.
6. Those who did not reenroll for a second semester.
7. Those who did not complete a "program."

Considering the above list, and that it could be expanded and qualified, "dropout rate," has little meaning. Much evidence has been presented in this and previous reports that many students have no intention of finishing a course, no less a complete program, when they enroll. If you take into account student intent, the dropout rate is considerably reduced.

ON CONDUCTING A STATEWIDE STUDY

During the last four years, I have learned a great deal about managing a research project that requires the collection of common data in a common manner, from a number of different colleges. Other than the planned communication channels and data error correction cycles described in Chapter 1 of this report, there are four requirements for a statewide research project to be successful.

First, it takes money--lots of it. The amount required is normally underestimated. One forgets the time it takes for such things as training interviewers, and printing and distributing reports. The four-year budget for the SLS was roughly $500,000. Though equal funding was not a condition of the contracts, I estimate the 15 colleges spent almost the equivalent sum in terms of the time and effort to plan for, correct, and analyze SLS data.

Second, it takes "research smarts." When one is attempting to collect the same kind of data (particularly interview data) from locations that are hundreds of miles apart, management decisions must be guided by appropriate research procedures. Prototyping (that is, classifying students into groups) is a noxious procedure for many community college counselors. Counselors see themselves as dealing with each individual: thus, categorization is unacceptable. The researcher, on the other hand, is continually looking for appropriate categories so that large numbers of diverse events can be explained and described with a minimum number of concepts. According to many of the researchers in the state, the prototyping procedures were the major contribution of the SLS.

Third, data collected by each college must be deemed valuable to the college administration without regard to its statewide implications. When agreeing to participate in a statewide project, the presidents and deans of the colleges know they will not be reimbursed to the full extent of their participation by the agency sponsoring the research. Because they expect the project to cost the college something, they will refuse to participate unless they can anticipate a benefit to the college administration. The benefit is enhanced if several colleges collect the same data, and the administrators have a norm or standard on which to judge their own college.

Fourth, there must be enthusiasm on the part of the project participants, they must feel an esprit de corps--an identification with their colleagues from the other colleges. Each participant must see the value of the project and of the data they are collecting and know that their work is necessary and useful to the project as a whole.

CONCLUSION AND RECOMMENDATIONS

The general conclusion from the findings presented earlier in this report is: California Community Colleges have diversified, they have incorporated into their educational offerings any courses or programs needed by their communities. As long as there are funds to support the offerings, the colleges are largely successful. If the reports of the students are valid, this diversification has not deterred the quality of the offerings.

However, with severe cuts being made in the college budgets, fewer publics can be served. California citizens, speaking through the Legislature, may well determine that community colleges should limit their offerings, and that they should NOT serve Leisure Skills Students, foreign students who need English skills, or day students whose academic skills are too low to be improved sufficiently for college work.

I recommend that Administrators and Trustees learn to think, not small, but smaller. Bigger is not synonymous with better.

I also recommend that longitudinal studies similar to the SLS be carried out continuously and the results used to monitor changes in the student body and to evaluate our success in accomplishing the stated mission and functions of California Community Colleges.

BIBLIOGRAPHY

California Postsecondary Education Commission. Missions and Functions of the California Community Colleges. One in a Series of Staff Papers for Discussion. Commission Report 81-14. Sacramento: California Postsecondary Education Commission, 1981. 30p. (ED 203 957)

Clark, Burton R. "The 'Cooling-Out' Function in Higher Education." American Journal of Sociology, 1960, 65(6), 569-576.

Clark, Burton R. "The 'Cooling Out' Function Revisited." In G. B. Vaughan (Ed.), New Directions for Community Colleges: Questioning the Community College Role, no 32. San Francisco: Jossey-Bass, 1980.

Gold, Ben K.; and Morris, William. Student Accountability Model (SAM): Operations Manual. Sacramento: California Community Colleges, Office of the Chancellor, 1981. 99p. (ED 135 443)

Kissler, Gerald R. Report of the Task Group on Retention and Transfer. University of California Enrollment Study.Berkeley: Berkeley: University of California, Office of the Academic Vice President, 1980. 81p. (ED number to be assigned)

Knoell, Dorothy; and others. Through the Open Door: A Study of Patterns of Enrollment and Performance in California's Community Colleges. Sacramento: California Postsecondary Education Commission, 1976. 82p. (ED 119 752)

Pincus, Fred L. "The False Promises of Community Colleges: Class Conflict and Vocational Education." Harvard Educational Review, August 1960, 50(3), 332-361.

Sheldon, M. Stephen; and Hunter, Russell. Statewide Longitudinal Study: Report on Academic Year 1978-79. Part II--Spring Results. Woodland Hills, California: Los Angeles Pierce College, Office of Institutional Research, 1980. 95p. (ED 184 636)

Western Interstate Commission for Higher Education. High School Graduates: Projections for the Fifty States. Boulder: WICHE, November 1979

Wilms, Wellford W. Vocational Education and Social Mobility: A Study of Public and Proprietary School Dropouts and Graduates. Los Angeles: University of California, Graduate School of Education, 1980. 188p. (ED 183 966)

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